



Australian Government

LMF02 Furnishing Training Package

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CONTENTS

Imprint	18
Preliminary Information	19
History	20
Summary of AQF qualifications in this Training Package	24
Units of competency in this Training Package and their prerequisites	26
Summary mapping – LMF02v6	58
Overview	95
LMF02 development history	100
Overview of the Furnishing Training Package	107
Qualifications Framework	110
Qualification Pathways	117
Skill Sets	119
Employability Skills	119
Industry Requirements for Employability Skills	123
Assessment Guidelines	124
Competency Standards	137
Example Employability Skills unit	142
Competency Standards - Industry Contextualisation	144
Appendix A: Version 1	145
Appendix B: Version 2	169
Appendix C: Version 3	173
Appendix D: Version 4	179
Appendix E: Version 5	184
LMF10108 Certificate I in Furnishing	189
LMF20202 Certificate II in Furniture Finishing	205
LMF20309 Certificate II in Furniture Making	211
LMF20402 Certificate II in Glass and Glazing	220
LMF20502 Certificate II in Mattress and Base Making	226
LMF20602 Certificate II in Picture Framing	232
LMF20702 Certificate II in Soft Furnishing	238
LMF20802 Certificate II in Upholstery	245
LMF20908 Certificate II in Flooring Technology	251
LMF21008 Certificate II in Blinds and Awnings	259
LMF21108 Certificate II in Security Screens and Grills	266
LMF21208 Certificate II in Stained Glass and Lead Lighting	271
LMF21308 Certificate II in Coopering	277
LMF30202 Certificate III in Furniture Finishing	283
LMF30302 Certificate III in Furniture Making	291
LMF30502 Certificate III in Furniture Making (Wood Machining)	301
LMF30602 Certificate III in Glass and Glazing	311
LMF30702 Certificate III in Mattress and Base Making	320
LMF30802 Certificate III in Picture Framing	327
LMF30902 Certificate III in Soft Furnishing	335
LMF31002 Certificate III in Upholstery	344
LMF31102 Certificate III in Production Upholstery	353
LMF31208 Certificate III in Flooring Technology	362
LMF31308 Certificate III in Coopering	375
LMF31408 Certificate III in Musical Instrument Making and Repair	384
LMF31508 Certificate III in Piano Technology	393

LMF31608 Certificate III in Security Screens and Grills	403
LMF31708 Certificate III in Stained Glass and Lead Lighting.....	410
LMF31808 Certificate III in Blinds and Awnings.....	419
LMF31908 Certificate III in Interior Decoration (Retail Services).....	428
LMF32009 Certificate III in Kitchens and Bathrooms (Client Services)	435
LMF32109 Certificate III in Cabinet Making.....	443
LMF40202 Certificate IV in Furnishing Technology	456
LMF40308 Certificate IV in Musical Instrument Making and Repair.....	465
LMF40408 Certificate IV in Interior Decoration.....	474
LMF40508 Certificate IV in Furniture Design and Technology	484
LMF40609 Certificate IV in Design of Kitchens, Bathrooms and Interior Spaces.....	496
LMF50202 Diploma of Furnishing Technology	506
LMF50308 Diploma of Stained Glass and Lead Lighting	516
LMF50408 Diploma of Interior Design and Decoration.....	525
LMF50508 Diploma of Furniture Design and Technology	538
LMF60102 Advanced Diploma of Furnishing Management.....	552
LMF60208 Advanced Diploma of Interior Design.....	558
LMF60308 Advanced Diploma of Furniture Design and Technology	572
LMFAH4001A Recommend security technology, hardware and services	590
LMFAH4002A Prepare architectural door hardware schedules	602
LMFBA1001A Construct a basic roll up blind	616
LMFBA2001A Use blinds and awnings sector hand and power tools.....	624
LMFBA2002A Set up, operate and maintain blinds and awnings sector static machines	634
LMFBA2004A Select and apply blinds and awnings hardware and fixings	645
LMFBA2005A Construct roll up and pull down style blinds and awnings.....	653
LMFBA2006A Construct vertical style blinds	664
LMFBA2007A Construct textiles for canopy style awnings	675
LMFBA2008A Construct plastic and timber Venetian-style blinds	686
LMFBA2009A Construct aluminium Venetian-style blinds.....	697
LMFBA2010A Construct metal louvre and canopy hooded style awnings	708
LMFBA2011A Construct aluminium roll up style awnings.....	717
LMFBA3001A Install interior blinds.....	727
LMFBA3002A Install exterior blinds and awnings	738
LMFBA3003A Install timber shutters	748
LMFBA3004A Construct folding arm style awnings.....	757
LMFBA3005A Construct framework for canopy- style awnings.....	768
LMFBA3006A Construct pleated style blinds.....	778
LMFBA3007A Construct wood weave style blinds.....	789
LMFBA3008A Construct pelmets	799
LMFBA3009A Provide advice to customers on blinds and awnings.....	809
LMFBA4001A Assess suitability of blinds or awnings	818
LMFCP2001A Use coopering sector hand and power tools.....	826
LMFCP2002A Produce barrels using non-fired processes	836
LMFCP3001A Apply product and material knowledge to coopering operations.....	847
LMFCP3002A Select and season timber for coopering production.....	857
LMFCP3003A Produce barrels using fired processes	867
LMFCP3004A Maintain and repair barrels.....	878
LMFDN4001B Produce drawings from design concepts.....	889
LMFDN4002B Produce line and component production drawings	896
LMFDN4003B Produce patterns and/or templates	902
LMFDN4004B Design, construct and test jigs	909
LMFDN4005B Work within a furniture design team.....	915

LMFDN5001B Generate and transfer complex computer-aided drawings and specifications	922
LMFDN5006B Manage furniture design	930
LMFFDT4001A Apply finishing techniques to custom furniture	938
LMFFDT4002A Assemble custom furniture	948
LMFFDT4003A Assess and record the lifecycle of a product.....	957
LMFFDT4004A Assess environmental impact of a design	969
LMFFDT4005A Construct and evaluate furniture prototypes and samples	980
LMFFDT4006A Establish and maintain a safe furniture making work environment.....	990
LMFFDT4007A Establish the design brief.....	1001
LMFFDT4008A Determine occupational health and safety implications of designs.....	1010
LMFFDT4009A Prepare and present furniture design information	1021
LMFFDT4010A Produce and evaluate developmental furniture models to scale	1031
LMFFDT4011A Set up, operate and maintain basic static woodworking machines for furniture designs	1043
LMFFDT4012A Produce ideation drawings	1052
LMFFDT4013A Research and select furniture finishes	1061
LMFFDT4014A Research and select furniture materials and technology	1072
LMFFDT4015A Research furniture styles and movements	1083
LMFFDT4016A Select, use and maintain hand tools for the creation of custom furniture.....	1092
LMFFDT4017A Set up and operate a wood turning lathe to produce off-centre work..	1102
LMFFDT4018A Produce templates and jigs for custom made furniture.....	1112
LMFFDT5001A Apply ergonomics, anthropometrics and proxemic considerations to a product.....	1122
LMFFDT5002A Apply resources sustainably	1132
LMFFDT5003A Assess and resolve technical integrity of a design.....	1142
LMFFDT5004A Develop self as a furniture designer	1152
LMFFDT5005A Construct custom furniture using advanced techniques.....	1162
LMFFDT5007A Design a batch or limited production item of furniture.....	1174
LMFFDT5008A Design a furniture product using high volume technology services (HVTS) in production.....	1184
LMFFDT5009A Design a one-off item of furniture	1194
LMFFDT5010A Research and recommend alternative manufacturing processes.....	1204
LMFFDT5011A Research and recommend machine technology	1214
LMFFDT5013A Evaluate furniture design proposals and concepts.....	1225
LMFFDT6001A Assess economic impact of a design	1237
LMFFDT6002A Design for mass production	1246
LMFFDT6003A Evaluate and participate in design industry networks.....	1259
LMFFDT6004A Investigate legal requirements for design.....	1268
LMFFDT6005A Work collaboratively on a design project	1277
LMFFF1001B Complete a basic furniture finishing product	1288
LMFFF2001B Use furniture finishing sector hand and power tools.....	1296
LMFFF2002B Dismantle/re-assemble furniture	1304
LMFFF2003B Remove surface coatings	1312
LMFFF2004B Prepare surfaces for finishing.....	1320
LMFFF2005B Maintain spray equipment and booth.....	1328
LMFFF2006B Apply surface coatings by spray gun	1336
LMFFF2007B Apply stains, fillers and bleach.....	1343
LMFFF2008B Apply surface coatings by hand.....	1351
LMFFF3001B Match and make up colours.....	1359
LMFFF3002B Set up, operate and maintain mechanical coatings systems.....	1367
LMFFF3003B Apply plural component coatings.....	1376
LMFFF3004B Apply soft rubber techniques	1385

LMFFF3005B Enhance finishes.....	1392
LMFFF3006B Repair and touch up surfaces	1400
LMFFF3007B Apply graining and decorative finishes	1410
LMFFF3008B Apply traditional French polishing techniques.....	1418
LMFFF3009B Set up, operate and maintain CNC coating systems.....	1427
LMFFL1001A Complete simple floor covering installation.....	1434
LMFFL2001A Use flooring technology sector hand and power tools.....	1443
LMFFL2002A Receive and prepare floor covering materials for installation	1453
LMFFL2003A Select, operate and maintain floor covering cutting machine	1464
LMFFL2004A Moisture test timber and concrete floors	1474
LMFFL2101A Remove existing floor coverings.....	1484
LMFFL2102A Prepare, select and apply smoothing and patching compounds	1493
LMFFL2103A Select and apply appropriate compounds and additives	1503
LMFFL2104A Prepare concrete sub-floors using wet cleaning methods	1514
LMFFL2105A Select, prepare and apply moisture barriers and damp proof membranes to concrete sub-floors.....	1524
LMFFL2106A Prepare walls for coverings	1533
LMFFL2107A Select, operate and maintain grinding equipment.....	1544
LMFFL2108A Select, operate and maintain shot blasting equipment.....	1554
LMFFL2109A Select, operate and maintain demolition equipment.....	1564
LMFFL2110A Select, operate and maintain scarifying equipment	1574
LMFFL2111A Coarse sand timber flooring.....	1584
LMFFL2112A Install hard underlays.....	1595
LMFFL2201A Install carpet cushion/underlays and gripper accessories	1606
LMFFL2202A Install unpatterned tufted and bonded carpet floor coverings	1617
LMFFL2203A Install carpet tiles using standard installation procedures.....	1626
LMFFL2204A Install unpatterned tufted and bonded carpet floor coverings to stairs..	1637
LMFFL2301A Install lay flat vinyl floor coverings	1647
LMFFL2302A Install resilient tiles using standard installation procedures	1658
LMFFL2501A Install laminate and engineered timber flooring	1668
LMFFL2502A Install impact and sound absorption underlay	1679
LMFFL2503A Nail strip timber flooring.....	1689
LMFFL2504A Install expansion joints	1700
LMFFL2505A Install mouldings and edge trims to timber flooring.....	1711
LMFFL3001A Plan and cost flooring technology work	1722
LMFFL3002A Establish and maintain a safe flooring technology work environment ...	1734
LMFFL3101A Inspect sub-floors	1745
LMFFL3102A Prepare, select and apply screed to concrete sub-floors	1756
LMFFL3201A Install carpet tiles using custom designs.....	1766
LMFFL3202A Install adhesive fixed carpet floor coverings.....	1776
LMFFL3203A Install commercial carpet floor coverings.....	1786
LMFFL3204A Install patterned carpet floor coverings	1796
LMFFL3205A Install custom design carpet and decorative finishes	1806
LMFFL3206A Install synthetic textile floor coverings to sports facilities	1817
LMFFL3207A Install carpet floor coverings to custom design stairs	1828
LMFFL3301A Install linoleum floor coverings.....	1838
LMFFL3302A Install commercial vinyl floor coverings	1849
LMFFL3303A Install resilient floor coverings using custom designs and decorative finishes	1860
LMFFL3304A Install resilient tiles using custom design and decorative finishes	1871
LMFFL3305A Install rubber floor coverings.....	1881
LMFFL3306A Install resilient sheet to walls.....	1892
LMFFL3307A Install resilient sheet to bench and counter tops.....	1903

LMFFL3308A	Install anti-static resilient floor coverings.....	1913
LMFFL3309A	Install conductive resilient floor coverings.....	1924
LMFFL3310A	Cut and install resilient floor coverings to stairs.....	1935
LMFFL3401A	Mix and apply epoxy and seamless floor coverings.....	1947
LMFFL3402A	Apply solvent based coatings to timber flooring	1958
LMFFL3403A	Apply water-based coatings to timber flooring	1969
LMFFL3404A	Apply oil-based coatings to timber flooring.....	1980
LMFFL3405A	Apply composite based coatings.....	1991
LMFFL3406A	Apply emulsion wax	2002
LMFFL3407A	Apply stains and fillers	2013
LMFFL3501A	Adapt and apply custom designs to timber flooring	2024
LMFFL3502A	Cut and install timber flooring materials to stairs.....	2034
LMFFL3503A	Install direct stick timber flooring.....	2044
LMFFL3504A	Inspect defective timber flooring	2055
LMFFL3505A	Install block parquetry flooring.....	2064
LMFFL3506A	Install cork tiles	2074
LMFFL3507A	Install patterned parquetry flooring.....	2084
LMFFL3508A	Install mosaic parquetry flooring	2094
LMFFL3509A	Install sprung timber flooring.....	2105
LMFFL3510A	Install strip timber flooring onto battens.....	2116
LMFFL3511A	Install strip timber flooring onto plywood.....	2127
LMFFL3512A	Repair timber flooring.....	2138
LMFFL3513A	Maintain timber, laminate and engineered flooring	2149
LMFFL3601A	Fine sand timber flooring	2160
LMFFL3602A	Edge sand timber flooring	2171
LMFFL3603A	Sand cork flooring.....	2182
LMFFL3604A	Sand and fill parquetry flooring	2194
LMFFL3605A	Apply finishes to cork flooring.....	2207
LMFFM1001B	Construct a basic timber furnishing product	2218
LMFFM1002B	Operate basic woodworking machines	2226
LMFFM2001B	Use furniture making sector hand and power tools	2234
LMFFM2002B	Assemble furnishing components.....	2242
LMFFM2003B	Select and apply hardware	2250
LMFFM2004B	Apply sheet laminates by hand.....	2258
LMFFM2005B	Join solid timber	2265
LMFFM2006B	Hand make timber joints	2273
LMFFM2007B	Follow plans to assemble production furniture	2281
LMFFM2008B	Bend and form cane	2289
LMFFM2009B	Construct cane furniture	2296
LMFFM2010B	Set up, operate and maintain basic static machines.....	2304
LMFFM2011B	Apply manufactured board conversion techniques.....	2314
LMFFM2012B	Set up, operate and maintain pressure and clamping machines	2323
LMFFM3001B	Construct chair and couch frames.....	2333
LMFFM3002B	Construct furniture using leg and rail method.....	2341
LMFFM3003B	Produce angled and curved furniture using manufactured board	2350
LMFFM3004B	Produce angled and curved furniture using solid timber	2359
LMFFM3005B	Fabricate custom furniture.....	2368
LMFFM3006B	Install furnishing	2378
LMFFM3007B	Prepare and apply decorative surfaces for furniture.....	2386
LMFFM3010B	Select timbers for furniture production	2394
LMFFM3011B	Produce manual and computer-aided production drawings.....	2401
LMFFM3012B	Prepare cutting list from plans and job specifications.....	2407
LMFFM3013B	Measure and draw site layout for manufactured furniture products	2414

LMFFM3020B Set up, operate and maintain sawing machines	2420
LMFFM3021B Set up, operate and maintain drilling machines	2430
LMFFM3022B Set up, operate and maintain joining machines.....	2439
LMFFM3023B Set up, operate and maintain planing and finishing machines.....	2448
LMFFM3024B Set up, operate and maintain multi-head planing and moulding machines.....	2457
LMFFM3025B Set up, operate and maintain routing and shaping machines	2466
LMFFM3026B Set up, operate and maintain mechanical wood turning lathes	2475
LMFFM3027B Set up, operate and maintain automated edge banding machines.....	2484
LMFFM3028B Fabricate synthetic solid surface products.....	2493
LMFFM3030B Set up, operate and maintain CNC sizing machines	2501
LMFFM3031B Set up, operate and maintain CNC machining and processing centres..	2508
LMFFM3032B Produce and maintain cutting tools	2517
LMFFM3033B Construct jigs and fixtures	2526
LMFFM4005A Hand carve wood to custom design	2534
LMFFM4006A Construct joints for custom furniture	2544
LMFFM4007A Produce curved and shaped components for custom furniture	2554
LMFFM4008A Produce timber veneered components for custom furniture	2564
LMFFT4001B Coordinate on-site installation of furnishing products	2575
LMFFT4002B Customise stock lines.....	2582
LMFFT4003B Organise production processes.....	2589
LMFFT4004B Establish and monitor production inventory requirements	2598
LMFFT4005B Install and commission CNC software.....	2606
LMFFT4006B Construct prototypes and samples.....	2613
LMFFT4007B Sample, inspect and test products to specifications.....	2622
LMFFT4008B Interpret and use workplace information	2629
LMFFT4009A Match furnishing style/materials to customer requirements	2635
LMFFT4010B Identify and calculate production costs	2642
LMFFT4011B Purchase materials and consumables	2650
LMFFT4012A Prepare a tender submission	2657
LMFFT5001B Evaluate and select production materials and equipment.....	2664
LMFFT5002B Establish and develop production processes and area layout	2671
LMFFT5003B Manage installation and commissioning of equipment	2680
LMFFT5004B Develop and document procedures and specifications.....	2688
LMFFT5005B Organise enterprise maintenance programs.....	2695
LMFFT5006B Plan production	2704
LMFFT5010B Optimise CNC operations.....	2712
LMFFT5011B Develop, trial and evaluate prototypes	2719
LMFFT5012B Determine production feasibility of designs.....	2729
LMFFT5013B Develop products and related processes.....	2736
LMFFT5014B Establish and monitor business information systems.....	2744
LMFFT5015B Establish and implement contracts for external goods or services	2752
LMFFT5016B Establish customer contracts.....	2761
LMFFT6001B Research and evaluate products, materials and processes	2768
LMFGG1001B Complete a basic glass and glazing project.....	2776
LMFGG2001B Use glass and glazing sector hand and power tools.....	2784
LMFGG2002B Apply First Aid.....	2792
LMFGG2003B Operate glass freefall rack and table	2801
LMFGG2004B Process thin glass by hand	2809
LMFGG2005B Move glass sheets by hand	2819
LMFGG2006B Move single glass sheets by mechanical means	2828
LMFGG2007B Process glass by basic machines	2836
LMFGG2008B Glaze/reglaze residential windows and doors	2846
LMFGG2009B Fabricate and assemble metal frames.....	2857

LMFGG2010B Fabricate and install insect and security screens.....	2867
LMFGG3001B Store and handle glass.....	2877
LMFGG3002B Assess glass and glazing requirements	2887
LMFGG3003B Move block/bulk glass sheet by mechanical means	2897
LMFGG3004B Process thick glass by hand	2906
LMFGG3005B Process glass by semi-automatic and automatic machines	2916
LMFGG3006B Apply film to glass	2926
LMFGG3007B Form glass	2936
LMFGG3008B Apply patterns and designs to glass.....	2945
LMFGG3009B Set up and operate glass laminating equipment	2954
LMFGG3010B Set up and operate glass toughening equipment	2964
LMFGG3011B Set up and operate glass silvering equipment.....	2974
LMFGG3012B Set up and operate insulated glass unit manufacturing equipment.....	2984
LMFGG3013B Construct and repair leadlight panels	2994
LMFGG3014 Prepare and install mirrors.....	3004
LMFGG3015B Fabricate and install shower screens and wardrobe doors.....	3014
LMFGG3016B Fabricate and install residential windows and doors	3024
LMFGG3017B Fabricate and install commercial glazing.....	3033
LMFGG3018B Prepare and install architectural engineered glazing	3043
LMFGG3019B Conduct commercial and structural glazing.....	3053
LMFGN2002B Move and store materials and products	3064
LMFGN3001B Read and interpret work documents	3073
LMFGN3002B Estimate and cost job	3081
LMFID1001A Plan the decoration of a simple space.....	3089
LMFID3002A Source and specify decoration products	3098
LMFID3005A Style a retail display.....	3108
LMFID4001A Research, analyse and apply colour for interior spaces	3119
LMFID4002A Decorate residential interiors.....	3132
LMFID4003A Prepare a materials board for client presentation	3145
LMFID4004A Research and recommend furniture and accessories	3157
LMFID4005A Research and recommend soft furnishings for interiors	3170
LMFID4006A Research and recommend hard materials and finishes for interiors	3182
LMFID4007A Identify materials, construction techniques and methods used in building interiors.....	3194
LMFID4008A Assess interior light and recommend light fittings.....	3201
LMFID4009A Research architectural styles and movements.....	3213
LMFID4010A Research interior decoration and design influences	3222
LMFID4011A Determine occupational health and safety implications of interior effects.....	3231
LMFID5001A Design residential interiors	3242
LMFID5002A Develop a decoration proposal for a complex site.....	3254
LMFID5003A Evaluate site for interior design brief	3264
LMFID5004A Specify structural elements, systems and services for interior spaces	3275
LMFID5005A Explore and apply creative design methodology to interior space	3285
LMFID5006A Design interior lighting.....	3293
LMFID5007A Decorate for events	3305
LMFID5008A Design for people with disabilities and the elderly.....	3317
LMFID5009A Research and recommend colour and applied finishes	3331
LMFID5010A Provide interior styling service	3343
LMFID5011A Specify soft furnishings for complete interior solution.....	3355
LMFID5012A Research and recommend artwork	3366
LMFID5013A Design for small to medium scale commercial or institutional interiors	3379
LMFID5014A Use CAD applications to complete models and documentation for interior design projects.....	3391

LMFID5015A Decorate interiors for restoration projects.....	3401
LMFID6001A Resolve complex spatial design problems through modelling.....	3413
LMFID6002A Apply 3-D visualisation techniques to represent interior designs	3422
LMFID6003A Design for large scale commercial or institutional interiors	3432
LMFID6004A Design interiors for hospitality environments	3445
LMFID6005A Design for retail interiors	3458
LMFID6006A Design for conservation and restoration projects	3471
LMFID6007A Select and instruct consultants and contractors.....	3484
LMFID6008A Evaluate design project outcomes	3494
LMFID6009A Produce digital presentations for commercial projects	3504
LMFKB2001A Prepare for cabinet installation.....	3516
LMFKB2002A Provide assistance in cabinet installation	3523
LMFKB3001A Identify processes in kitchen and bathroom projects.....	3531
LMFKB3002A Determine requirements for installation of cabinets	3540
LMFKB3003A Check and measure fit of cabinets	3551
LMFKB3004A Conduct on-site adjustments to cabinets and components	3558
LMFKB3005A Fabricate cabinets for the built-in environment	3566
LMFKB3006A Install fitted cabinets and components	3575
LMFKB3007A Provide advice on cabinet design features.....	3583
LMFKB3008A Identify cabinet construction and installation methods	3593
LMFKB4001A Determine spatial planning considerations for kitchen design.....	3602
LMFKB4002A Research and recommend materials, components and finishes for kitchen designs.....	3611
LMFKB4003A Identify and document services required to support fitted furniture designs.....	3622
LMFKB4004A Determine spatial planning considerations for bathroom design	3632
LMFKB4005A Research and recommend materials, components and finishes for bathroom designs	3641
LMFKB4006A Prepare quotation and contract documentation for design project.....	3652
LMFKB4007A Design ancillary residential cabinetry	3660
LMFKB4008A Determine layout for laundry components.....	3669
LMFMB1001B Complete a basic mattress and base product.....	3678
LMFMB2001B Use mattress and base sector hand and power tools	3686
LMFMB2002B Prepare and assemble base unit.....	3694
LMFMB2003B Assemble mattress components.....	3702
LMFMB2004B Cut mattress and base fabrics	3710
LMFMB3001B Assemble springs for mattresses	3717
LMFMB3002B Make springs for mattresses and bases	3724
LMFMB3003B Set up, operate and maintain a tape edging machine	3732
LMFMB3004B Set up, operate and maintain a quilting machine.....	3740
LMFMI3001A Assemble instrument components	3748
LMFMI3002A Construct and apply decorative treatments and finishes to musical instruments.....	3759
LMFMI3003A Manufacture acoustic guitars.....	3769
LMFMI3004A Manufacture brass instruments.....	3780
LMFMI3005A Manufacture electric guitars.....	3791
LMFMI3006A Manufacture percussion instruments.....	3802
LMFMI3007A Manufacture special stringed instruments	3813
LMFMI3008A Manufacture stringed instruments	3824
LMFMI3009A Repair brass instruments	3835
LMFMI3010A Repair percussion instruments	3846
LMFMI3011A Repair woodwind instruments	3857
LMFMI4001A Repair acoustic guitars	3868

LMFMI4002A Repair electric guitars	3879
LMFMI4003A Repair special stringed instruments	3890
LMFMI4004A Repair stringed instruments.....	3901
LMFPP1001B Frame a simple artwork.....	3912
LMFPP2001B Use picture framing sector hand and power tools	3920
LMFPP2002B Cut mouldings to length	3929
LMFPP2003B Join mouldings	3937
LMFPP2004B Mount artwork.....	3946
LMFPP2005B Cut mat boards	3957
LMFPP2006B Cut and handle glazing materials for framing.....	3965
LMFPP2007B Assemble artwork package (basic).....	3974
LMFPP2008B Recognise and repair finishes of framing materials	3981
LMFPP3001B Deframe artwork	3990
LMFPP3002B Decorate mat boards.....	3998
LMFPP3003B Set up and operate CNC machines.....	4006
LMFPP3004B Prepare textiles for framing.....	4015
LMFPP3005B Recognise and handle artwork for framing.....	4024
LMFPP3006B Prepare design requirements for framing	4032
LMFPP3007B Apply frame finishes.....	4041
LMFPP3008B Assemble artwork package (complex)	4051
LMFPP3009B Install artwork	4060
LMFPP4001B Design and construct ornamental frames	4069
LMFPP4002B Determine and apply gilding techniques	4079
LMFPT3001A Develop knowledge of piano industry	4088
LMFPT3002A Select materials for piano repair and manufacture	4095
LMFPT3003A Repair upright and grand piano action, keys and pedals.....	4106
LMFPT3004A Rebuild upright and grand piano action, keys and pedals	4117
LMFPT3005A Re-string and re-pin a piano	4127
LMFPT3006A Regulate action, keys and pedals of upright pianos	4138
LMFPT3007A Regulate actions, keys and pedals of grand pianos	4147
LMFPT3008A Understand piano tuning theory and basic acoustics.....	4156
LMFPT3009A Develop control of tuning hammers.....	4163
LMFPT3010A Pitch raise.....	4172
LMFPT3011A Tune unisons aurally to a beatless condition	4181
LMFPT3012A Tune octaves aurally to appropriate stretch.....	4190
LMFPT3013A Tune a temperament octave to produce an equally tempered scale	4199
LMFPT3014A Tune a piano aurally and_or electronically within time and accuracy constraints	4208
LMFPT3015A Voice a piano.....	4220
LMFPT3016A Provide advice to customers on piano tuning and repair	4230
LMFSF1001B Produce basic soft furnishing accessories	4239
LMFSF2001B Cut single layer fabrics.....	4246
LMFSF2002B Machine sew materials	4253
LMFSF2003B Machine sew using specific techniques.....	4262
LMFSF2004B Hand sew soft furnishings	4272
LMFSF2005B Operate a steam press.....	4280
LMFSF2006B Calculate fabric quantities for window coverings.....	4287
LMFSF2007B Construct unlined curtains/drapes.....	4295
LMFSF2008B Construct lined curtains/drapes	4305
LMFSF2009B Construct padded pelmets.....	4315
LMFSF2010B Make up tracks for window coverings	4322
LMFSF2011B Fit and adjust curtain hardware.....	4329
LMFSF2012B Fit and adjust interior blinds	4336

LMFSF2013B Dress windows	4343
LMFSF2014B Use soft furnishing sector hand and power tools	4350
LMFSF3001B Operate drop cutting machines	4357
LMFSF3002B Use automated curtain pleating equipment.....	4365
LMFSF3003B Follow patterns to produce window toppings.....	4372
LMFSF3004B Construct roman style blinds.....	4380
LMFSF3005B Construct Austrian/festoon style blinds	4390
LMFSF3006B Chemically join textiles.....	4400
LMFSF3007B Lay out patterns and cut fabrics.....	4408
LMFSF3008B Measure up and calculate fabric quantities for window coverings	4416
LMFSF3009B Manufacture bedspreads.....	4423
LMFSF3010B Manufacture bed linen and table cloths.....	4431
LMFSF3011B Advise customers on interior decoration	4439
LMFSF3012B Install motorised curtains and blinds.....	4446
LMFSF3013B Follow patterns to produce soft furnishing accessories	4453
LMFSF3014B Provide technical advice to customers	4462
LMFSL2001A Assemble lead light and stained glass components.....	4468
LMFSL3001A Apply product and material knowledge to lead light and stained glass operations	4478
LMFSL3002A Paint glass.....	4487
LMFSL3003A Fire glass.....	4496
LMFSL3004A Protect stained glass and lead lighting.....	4505
LMFSL3005A Fabricate and install residential lead light and stained glass windows and doors.....	4514
LMFSL3006A Prepare and install architectural engineered lead light and stained glass	4525
LMFSL5001A Assess conservation requirements.....	4536
LMFSL5002A Remove heritage lead light and stained glass.....	4546
LMFSL5003A Conserve heritage lead light and stained glass	4556
LMFSL5004A Install heritage lead light and stained glass.....	4567
LMFSL5005A Apply innovation in contemporary lead light and stained glass	4577
LMFSS2001A Use security screens and grills hand and power tools.....	4587
LMFSS2002A Rectify faults in product.....	4598
LMFSS2003A Prepare product for Australian Standards testing	4607
LMFSS2004A Undertake surface preparation	4615
LMFSS3001A Install security screens and grills.....	4626
LMFSS3002A Apply patterns and designs to security screens and grills.....	4635
LMFSS3003A Resolve quality and compliance issues	4645
LMFUP1001B Complete a basic upholstery project	4655
LMFUP2001B Use upholstery sector hand and power tools.....	4664
LMFUP2002B Fit upholstery components	4674
LMFUP2003B Apply contemporary foundations to upholstered furniture	4682
LMFUP2004B Machine sew upholstery final cover materials (basic)	4690
LMFUP2005B Develop cutting plan and cut single layer upholstery fabric	4698
LMFUP2006B Dismantle/reassemble furniture for upholstering	4707
LMFUP3001B Apply traditional foundations to upholstered furniture	4715
LMFUP3002B Fit and apply final cover materials to furniture using basic techniques	4723
LMFUP3003B Fit and apply final cover materials to furniture using decorative techniques	4731
LMFUP3004B Lay out patterns and cut leather	4740
LMFUP3005B Machine sew upholstery final cover materials (complex).....	4748
LMFUP3006B Fit and apply leather to furniture	4756
LMFUP3007B Manufacture and fit loose covers.....	4765
LMFUP3008B Apply finishing techniques to upholstered furniture	4774
LMFUP3009B Develop cutting plan and cut multiple layer upholstery fabric.....	4783

LMFUP3010B Cut, sew and fit skirts to upholstered furniture	4792
LMFUP3011B Cut, sew and fit or fill cushions	4801
LMFUP3012B Apply marine sewing and installation techniques	4810
LMFUP3013B Cut and sew canvas and acrylics	4818
LMFUP3014B Set up, operate and maintain CNC cutting machines	4827
BSBADM311A Maintain business resources	4836
BSBADV512A Develop an advertising strategy and brief	4844
BSBCCO304B Provide sales solutions to customers	4855
BSBCMM301A Process customer complaints	4863
BSBCRT401A Articulate, present and debate ideas	4871
BSBCRT402A Collaborate in a creative process	4879
BSBCRT403A Explore the history and social impact of creativity	4888
BSBCRT501A Originate and develop concepts	4895
BSBCRT601A Research and apply concepts and theories of creativity	4907
BSBCUS201A Deliver a service to customers	4916
BSBCUS301A Deliver and monitor a service to customers	4924
BSBCUS402A Address customer needs	4932
BSBDES201A Follow a design process	4939
BSBDES202A Evaluate the nature of design in a specific industry context	4948
BSBDES301A Explore the use of colour	4955
BSBDES302A Explore and apply the creative design process to 2D forms	4963
BSBDES303A Explore and apply the creative design process to 3D forms	4971
BSBDES304A Source and apply design industry knowledge	4979
BSBDES305A Source and apply information on the history and theory of design	4987
BSBDES401A Generate design solutions	4994
BSBDES403A Develop and extend design skills and practice	5004
BSBDES502A Establish, negotiate and refine a design brief	5012
BSBDES601A Manage design realisation	5021
BSBDES602A Research global design trends	5029
BSBFIA301A Maintain financial records	5037
BSBFLM309C Support continuous improvement systems and processes	5046
BSBINM601A Manage knowledge and information	5055
BSBINN201A Contribute to workplace innovation	5064
BSBITU101A Operate a personal computer	5072
BSBITU306A Design and produce business documents	5079
BSBMGT402A Implement operational plan	5087
BSBMGT605B Provide leadership across the organisation	5095
BSBMGT608B Manage innovation and continuous improvement	5104
BSBMGT616A Develop and implement strategic plans	5112
BSBMGT617A Develop and implement a business plan	5119
BSBMKG413A Promote products and services	5126
BSBMKG501B Identify and evaluate marketing opportunities	5134
BSBMKG605B Evaluate international marketing opportunities	5143
BSBMKG608A Develop organisational marketing objectives	5155
BSBMKG609A Develop a marketing plan	5165
BSBPMG510A Manage projects	5173
BSBPRO301A Recommend products and services	5182
BSBPRO401A Develop product knowledge	5191
BSBRKG304B Maintain business records	5199
BSBRSK501A Manage risk	5208
BSBSMB401A Establish legal and risk management requirements of small business ...	5217
BSBSMB402A Plan small business finances	5226
BSBSMB403A Market the small business	5234

BSBSMB404A Undertake small business planning	5242
BSBSMB405A Monitor and manage small business operations.....	5253
BSBSMB406A Manage small business finances.....	5261
BSBSMB407A Manage a small team	5269
BSBWOR204A Use business technology	5278
CPCCBC4037A Prepare drawings for heritage works	5286
CPCCCM3001A Operate elevated work platforms.....	5297
CPCCOHS1001A Work safely in the construction industry	5310
CUFANM302A Create 3D digital animations	5322
CUFANM303A Create 3D digital models.....	5335
CUFANM502A Create 3D digital environments.....	5345
CUFDIG303A Produce and prepare photo images	5356
CUFDIG304A Create visual design components	5368
CUFDIG507A Design digital simulations	5380
CULMS010B Contribute to the preservation of cultural material	5392
CUVCOR04B Originate concept for own work and conduct critical discourse	5400
CUVCOR07B Use drawing techniques to represent the object or idea	5408
CUVCOR08B Produce drawings to represent and communicate the concept	5414
CUVCOR09B Select and apply drawing techniques and media to represent and communicate the concept	5420
CUVCRS03B Produce computer-aided drawings	5428
CUVCRS04B Produce technical drawings	5435
CUVDES01A Apply colour theory in response to a brief	5443
CUVDSP07B Research and apply techniques for graphic design	5451
CUVDSP11B Research and apply techniques for illustrative work.....	5460
CUVDSP15B Research and apply techniques for application to spatial design	5469
CUVICS04B Originate and develop a concept.....	5478
CUVVSP01B Produce calligraphy	5487
CUVVSP02B Research and experiment with techniques to produce calligraphy	5495
CUVVSP14B Apply techniques to produce drawings	5505
CUVVSP15B Produce drawings.....	5512
HLTFA301B Apply first aid	5520
LMTTF2014A Weld plastic materials	5533
LMTTF3004A Perform advanced welding of plastic materials	5542
MEM05003B Perform soft soldering	5551
MEM05007C Perform manual heating and thermal cutting.....	5558
MEM05012C Perform routine manual metal arc welding.....	5565
MEM05050B Perform routine gas metal arc welding	5572
MEM06001B Perform hand forging	5579
MEM09002B Interpret technical drawing.....	5586
MEM15001B Perform basic statistical quality control	5593
MEM16006A Organise and communicate information	5600
MEM16007A Work with others in a manufacturing, engineering or related environment.....	5607
MEM16008A Interact with computing technology.....	5614
MEM16013A Operate in a self-directed team.....	5621
MEM18001C Use hand tools.....	5630
MEM30001A Use computer aided drafting systems to produce basic engineering drawings.....	5637
MEM30004A Use CAD to create and display 3D models.....	5644
MEM30024A Participate in quality assurance techniques	5651
MSACMC210A Manage the impact of change on own work	5658
MSACMC614A Develop a communications strategy to support production.....	5666
MSACMS200A Apply competitive manufacturing practices	5674
MSACMS201A Sustain process improvements	5682

MSACMS601A Analyse and map a value chain	5689
MSACMS602A Manage a value chain.....	5697
MSACMS603A Develop manufacturing related business plans.....	5705
MSACMT220A Apply quick changeover procedures	5713
MSACMT221A Apply Just in Time (JIT) procedures	5721
MSACMT230A Apply cost factors to work practices	5730
MSACMT240A Apply 5S procedures in a manufacturing environment	5737
MSACMT250A Monitor process capability	5746
MSACMT251A Apply quality standards	5754
MSACMT260A Use planning software systems in manufacturing.....	5764
MSACMT261A Use SCADA systems in manufacturing.....	5771
MSACMT270A Use sustainable energy practices.....	5779
MSACMT271A Use sustainable environmental practices	5786
MSACMT280A Undertake root cause analysis.....	5794
MSACMT281A Contribute to the application of a proactive maintenance strategy	5802
MSACMT430A Improve cost factors in work practices	5810
MSACMT450A Undertake process capability improvements.....	5817
MSACMT452A Apply statistics to processes in manufacturing	5825
MSACMT630A Optimise cost of product.....	5834
MSACMT631A Undertake value analysis of product costs in terms of customer requirements	5841
MSACMT650A Determine and improve process capability.....	5849
MSACMT661A Determine and establish information collection requirements and processes	5857
MSACMT675A Facilitate the development of a new product.....	5865
MSAENV272B Participate in environmentally sustainable work practices	5875
MSAENV472A Implement and monitor environmentally sustainable work practices...5884	
MSAENV472B Implement and monitor environmentally sustainable work practices...5891	
MSAENV672B Develop workplace policy and procedures for environmental sustainability5901	
MSAPMOHS100A Follow OHS procedures	5910
MSAPMOHS200A Work safely.....	5916
MSAPMOHS300A Facilitate the implementation of OHS for a work group	5924
MSAPMOPS101A Make measurements.....	5932
MSAPMOPS363A Organise on site work.....	5938
MSAPMPER200B Work in accordance with an issued permit.....	5945
MSAPMSUP102A Communicate in the workplace.....	5956
MSAPMSUP106A Work in a team	5962
MSAPMSUP201A Receive or despatch goods	5968
MSAPMSUP240A Undertake minor maintenance	5975
MSAPMSUP273A Handle goods.....	5983
MSAPMSUP383A Facilitate a team.....	5989
MSAPMSUP390A Use structured problem solving tools.....	5995
PSPPROC602A Direct the management of contracts	6001
SIRRMER009A Produce perspective drawing, plans and elevations	6010
SIRRMER020A Create and implement exhibition space	6017
SIRRRPK010A Recommend home and home improvement products and services	6025
SIRXINV002A Maintain and order stock	6036
SIRXSLS004A Build relationships with customers	6045
TDTD297B Shift a load using manually-operated equipment.....	6057
TLIA1107C Package goods	6067
TLIA1307C Receive goods	6076
TLIA1607C Use inventory systems to organise stock control.....	6086
TLIA2107C Despatch stock	6097

TLID1007C Operate a forklift.....6107
TLID207C Shift a load using manually-operated equipment.....6118
TLID307E Handle dangerous goods/hazardous substances6128

Modification History

Version Modification History


Version	Release Date	Comments
6	23 March 2011	<p>Inclusion of two new units of competency for architectural hardware specifying (LMFAH4001A and LMFAH4002A) as electives in LMF40202.ISC updates:</p> <p>All qualifications adjusted for flexibility requirements and inclusion of sustainability units of competency</p> <p>Four generic LMF units replaced with MSA generic units.Refer to History and Summary Mapping for details.</p>
5.01	July 2010	<p>ISC updates to two qualifications for flexibility requirements. One unit added to importation allowance and accredited courses included in LMF10108 and LMF30602.</p>
5.00	November 2009	<p>Version 5 incorporates one new Certificate IV qualification:</p> <p>LMF40609 Certificate IV in Design of Kitchens, Bathrooms and Interior SpacesEight (8) new LMF specialist units and four (4) additional units imported from other Training Packages have been included.Refer to History below for details.In addition, typographical errors have been corrected in the Range Statement for the following unit:</p> <p>LMFGG2007B Process glass by basic machines</p> <p>All items listing equipment should be 'May include'.</p>

Version	Release Date	Comments
4.00	4 May 2009	Version 4 incorporates units of competency and qualifications for kitchens and bathrooms.
3.00	February 2009	Version 3 incorporates units of competency and qualifications for new sectors in interior decoration and design and furniture design and technology. It also includes a modified Certificate I in Furnishing. Errors and omissions identified in LMF02v2 have been corrected – see History below for details.
2.00		Version 2 incorporates units and qualifications for new sectors in coopering, blinds and awnings, musical instrument making and repair, piano technology, floor technology, security screens and grills, stained glass and lead lighting. It includes revised qualifications in soft furnishing. It also includes reformatting of all units of competency and qualifications to comply with the new template requirements and to include employability skills. Imported units in all existing qualifications have been replaced with current versions.
1.00	10 February 2003	Primary release

Imprint

LMF02 Furnishing Training Package

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Preliminary Information

Important Note to Users

Training Packages are not static documents; they are amended periodically to reflect the latest industry practices and are version controlled. It is essential that the latest version is always used.

Check the version number before commencing training or assessment

This Training Package is Version - check whether this is the latest version by going to the National Training Information Service (www.ntis.gov.au) and locating information about the Training Package. Alternatively, contact Manufacturing Industry Skills Council at <http://www.mskills.com.au> to confirm the latest version number.

Explanation of version number conventions

The primary release Training Package is Version 1. When changes are made to a Training Package, sometimes the version number is changed and sometimes it is not, depending on the extent of the change. When a Training Package is reviewed it is considered to be a new Training Package for the purposes of version control, and is Version 1. Do not confuse the version number with the Training Packages national code (which remains the same during its period of endorsement).

Version modification history

The version details of this endorsed Training Package are in the table below. The latest information is at the top of the table.

Version	Release Date	Comments
6	23 March 2011	Inclusion of two new units of competency for architectural hardware specifying (LMFAH4001A and LMFAH4002A) as electives in LMF40202. ISC updates: <ul style="list-style-type: none"> • All qualifications adjusted for flexibility requirements and inclusion of sustainability units of competency • Four generic LMF units replaced with MSA generic units. Refer to History and Summary Mapping for details.
5.01	July 2010	ISC updates to two qualifications for flexibility requirements. One unit added to importation allowance and accredited courses included in LMF10108 and LMF30602.
5.00	November 2009	Version 5 incorporates one new Certificate IV qualification: <ul style="list-style-type: none"> • LMF40609 Certificate IV in Design of Kitchens, Bathrooms and Interior Spaces Eight (8) new LMF specialist units and four (4) additional units imported from other Training Packages have been included. Refer to History below for details.

		In addition, typographical errors have been corrected in the
		Range Statement for the following unit: <ul style="list-style-type: none"> LMFGG2007B Process glass by basic machines All items listing equipment should be 'May include'.
4.00	4 May 2009	Version 4 incorporates units of competency and qualifications for kitchens and bathrooms.
3.00	February 2009	Version 3 incorporates units of competency and qualifications for new sectors in interior decoration and design and furniture design and technology. It also includes a modified Certificate I in Furnishing. Errors and omissions identified in LMF02v2 have been corrected - see History below for details.
2.00	TBA	Version 2 incorporates units and qualifications for new sectors in coopering, blinds and awnings, musical instrument making and repair, piano technology, floor technology, security screens and grills, stained glass and lead lighting. It includes revised qualifications in soft furnishing. It also includes reformatting of all units of competency and qualifications to comply with the new template requirements and to include employability skills. Imported units in all existing qualifications have been replaced with current versions.
1.00	10 February 2003	Primary release

History

History

Version 6

- All LMF02 qualifications have been amended as follows:

- Certificate II to Advanced Diploma have had *MSAENV272B Participate in environmentally sustainable work practices* added to the core – this has involved increasing the number of units required to compete the qualification in most cases as otherwise the sustainability unit would have replaced a technical unit that has been deemed necessary for the outcome. In future stakeholders may be prepared to reduce the overall unit requirements without losing the technical integrity of the qualification.
- Certificates IV and Diploma have had *MSAENV472B Implement and monitor environmentally sustainable work practices* added to the electives
- Advanced Diplomas have had *MSAENV672B Develop workplace policy and procedures for environmental sustainability* added to the electives
- Wherever used *LMFCR0001B Follow safe working policies and practices* has been replaced by *MSAPMOHS100A Follow OHS procedures* in Certificates I and II and by *MSAPMOHS200A Work safely* for Cert III and above.
- Wherever used *LMFCR0002B Communicate in the workplace* has been replaced by *MSAPMSUP102A Communicate in the workplace*
- Wherever used *LMFCR0003B Carry out measurements and calculations* has been replaced by *MSAPMOPS101A Make measurements*
- Wherever used *LMFCR0004B Work effectively with others* has been replaced by *MSAPMSUP106A Work in a team*
- Qualification notes have been revised to include a more detailed qualification description, extended job roles/employment outcomes and application, information on pathways into and from the qualification, licensing advice and a common format for the packaging rules
- Electives have been grouped as A, B etc. and all qualifications have a group defining allowable importation from units in the LMF Package, other Training Packages and accredited courses. Where previous packaging did not allow enough imported units it has been amended to the minimum required; where it was already more than required it has been kept as is
- Packaging has been amended to meet the NQC flexibility rules and remove entry requirements, including some ambiguous references to completion of lower level qualifications in packaging advice in order to achieve the outcome (exception see comment on LMF60102 Advanced Diploma of Furnishing Management)
- One superseded imported unit has been updated: TLID307E.

Version 5

The following qualification and new units have been incorporated into LMF02v5:

LMF40609 Certificate IV in Design of Kitchens, Bathrooms and Interior Spaces

New units	
LMFKB4001A	Determine spatial planning considerations for kitchen designs
LMFKB4002A	Research, recommend and specify materials, components and finishes for kitchen designs
LMFKB4003A	Identify and document services required to support kitchen and bathroom designs

LMFKB4004A	Determine spatial planning considerations for bathroom designs
LMFKB4005A	Research, recommend and specify materials, components and finishes for bathroom designs
LMFKB4006A	Prepare quotation and contract documentation for design project
LMFKB4007A	Design ancillary residential cabinetry
LMFKB4008A	Determine layout for laundry components
New imported units	
BSBSMB403A	Market the small business
BSBCUS402	Address customer needs
BSBSMB406A	Manage small business finances
BSBMKG413A	Promote products and services

Version 4 - summary of changes to LMF02 Version 3

Revised qualification
LMF20309 Certificate II in Furniture Making
New qualifications
LMF32009 Certificate III in Kitchens and Bathrooms (Client Services)
LMF32109 Certificate III in Cabinet Making

A total of 37 units of competency for inclusion in LMF02 have been endorsed. These are made up of:

10 new LMF specialist units

27 units imported from other Training Packages (not previously imported to LMF).

Description of changes to LMF02 Version 3

The key changes from LMF02 Version 2 to LMF02 Version 3 are:

- The inclusion of units of competency and qualifications in two new sectors:
 - Interior decoration and design
 - Furniture design and technology

- Revision of the Certificate I in Furnishing to include a pathway for interior decoration and design
- Modification of the Certificate I in Furnishing to remove pathways inserted in error for security screens and grills, and stained glass and lead lighting (these sectors do not have a Certificate I pathway).
-
- **Errors and omissions in Version 2 corrected in Version 3**

The following errors in LMF02v2 have been corrected in the packaging rules and summary mapping tables.

Error	Correction	Qualifications affected
LMFBA2005A – incorrect title	Correct title is: <i>LMFBA2005A Construct roll up and pull down style blinds and awnings</i>	LMF10102, 21008 and 31808
BSBSMG402A BSBSMG403A	Correct codes are: <i>BSBSMB402A</i> <i>BSBSMB403A</i>	LMF40308 and 50308
Unit coded LMFBA2003A in blinds and awnings certificate does not exist	Unit removed from table and number of specialist units to be chosen from Group 2 adjusted to 14. Number from Group 3 adjusted to 6. No change to overall numbers.	LMF31808
LMFFL3001A	LMFFL3001B	LMF31208
CUVDES01B	CUVDES01A	LMF31408
LMFFM2002B	Correct title is <i>Assemble furnishing components</i>	LMF31508
CUVCOR07B LMFGN2002B CUVVSP14B	Listed twice in same group – corrected	LMF31708
TLIA1007C	Unit code should be: <i>TLID1007C</i>	LMF31808
TLID307B	TLID307D	LMF31808

CUVICS04B**CUVICS04A****LMF40308 and LMF50308****Wrong version code:****LMFMB2001A****LMFMB2001B****LMF20502****LMFMB2002A****LMFMB2002B****LMFMB2003A****LMFMB2003B****LMFMB2004A****LMFMB2004B****Units incorrectly loaded to NTIS in Version 2:****LMFPT3004****Correct code is
*LMFPT3004A*****LMFFF1001B****Unit loaded with incorrect
PCs for elements 3 and 4****Summary of AQF qualifications in this Training Package**

Code	Title
LMF10108	Certificate I in Furnishing
LMF20202	Certificate II in Furniture Finishing
LMF20309	Certificate II in Furniture Making
LMF20402	Certificate II in Glass and Glazing
LMF20502	Certificate II in Mattress and Base Making
LMF20602	Certificate II in Picture Framing
LMF20702	Certificate II in Soft Furnishing
LMF20802	Certificate II in Upholstery
LMF20908	Certificate II in Flooring Technology
LMF21008	Certificate II in Blinds and Awnings
LMF21108	Certificate II in Security Screens and Grills

LMF21208	Certificate II in Stained Glass and Lead Lighting
LMF21308	Certificate II in Coopering
LMF30202	Certificate III in Furniture Finishing
LMF30302	Certificate III in Furniture Making
LMF30502	Certificate III in Furniture Making (Wood Machining)
LMF30602	Certificate III in Glass and Glazing
LMF30702	Certificate III in Mattress and Base Making
LMF30802	Certificate III in Picture Framing
LMF30902	Certificate III in Soft Furnishing
LMF31002	Certificate III in Upholstery
LMF31102	Certificate III in Production Upholstery
LMF31208	Certificate III in Flooring Technology
LMF31308	Certificate III in Coopering
LMF31408	Certificate III in Musical Instrument Making and Repair
LMF31508	Certificate III in Piano Technology
LMF31608	Certificate III in Security Screens and Grills
LMF31708	Certificate III in Stained Glass and Lead Lighting
LMF31808	Certificate III in Blinds and Awnings
LMF31908	Certificate III in Interior Decoration (Retail Services)
LMF32009	Certificate III in Kitchens and Bathrooms (Client Services)
LMF32109	Certificate III in Cabinet Making
LMF40202	Certificate IV in Furnishing Technology
LMF40308	Certificate IV in Musical Instrument Making and Repair
LMF40408	Certificate IV in Interior Decoration
LMF40508	Certificate IV in Furniture Design and Technology

LMF40609	Certificate IV in Design of Kitchens, Bathrooms and Interior Spaces
LMF50202	Diploma of Furnishing Technology
LMF50308	Diploma of Stained Glass and Lead Lighting
LMF50408	Diploma of Interior Design and Decoration
LMF50508	Diploma of Furniture Design and Technology
LMF60102	Advanced Diploma of Furnishing Management
LMF60208	Advanced Diploma of Interior Design
LMF60308	Advanced Diploma of Furniture Design and Technology

Units of competency in this Training Package and their prerequisites

Code	Title	Prerequisite
LMFAH4001A	Recommend security technology, hardware and services	None
LMFAH4002A	Prepare architectural door hardware schedules	None
LMFBA1001A	Construct a basic roll up blind	None
LMFBA2001A	Use blinds and awnings sector hand and power tools	None
LMFBA2002A	Set up, operate and maintain blinds and awnings sector static machines	None
LMFBA2004A	Select and apply blinds and awnings sector hardware and fixings	None
LMFBA2005A	Construct roll up and pull down style blinds and awnings	None
LMFBA2006A	Construct vertical-style blinds	None
LMFBA2007A	Construct textiles for canopy-style awnings	None

LMFBA2008A	Construct plastic and timber Venetian-style blinds	None
LMFBA2009A	Construct aluminium Venetian-style blinds	None
LMFBA2010A	Construct metal louvre and canopy hooded style awnings	None
LMFBA2011A	Construct aluminium roll up style awnings	None
LMFBA3001A	Install interior blinds	None
LMFBA3002A	Install exterior blinds and awnings	None
LMFBA3003A	Install timber shutters	None
LMFBA3004A	Construct folding arm style awnings	None
LMFBA3005A	Construct framework for canopy-style awnings	None
LMFBA3006A	Construct pleated-style blinds	None
LMFBA3007A	Construct wood weave-style blinds	None
LMFBA3008A	Construct pelmets	None
LMFBA3009A	Provide advice to customers on blinds and awnings	None
LMFBA4001A	Assess suitability of blinds or awnings	None
LMFCP2001A	Use coopering sector hand and power tools	None
LMFCP2002A	Produce barrels using non-fired processes	None
LMFCP3001A	Apply product and material knowledge to coopering operations	None
LMFCP3002A	Select and season timber for coopering production	None
LMFCP3003A	Produce barrels using fired processes	None
LMFCP3004A	Maintain and repair barrels	None
LMFDN4001B	Produce drawings from design concepts	None

LMFDN4002B	Produce line and component production drawings	None
LMFDN4003B	Produce patterns and/or templates	None
LMFDN4004B	Design, construct and test jigs	None
LMFDN4005B	Work within a furniture design team	None
LMFDN5001B	Generate and transfer complex computer-aided drawings and specifications	None
LMFDN5006B	Manage furniture design	None
LMFFDT4001A	Apply finishing techniques to custom furniture	None
LMFFDT4002A	Assemble custom furniture	None
LMFFDT4003A	Assess and record the lifecycle of a product	None
LMFFDT4004A	Assess environmental impact of a design	None
LMFFDT4005A	Construct and evaluate furniture prototypes and samples	None
LMFFDT4006A	Establish and maintain a safe furniture making work environment	None
LMFFDT4007A	Establish the design brief	None
LMFFDT4008A	Determine occupational health and safety implications of designs	None
LMFFDT4009A	Prepare and present furniture design information	None
LMFFDT4010A	Produce and evaluate developmental furniture models to scale	None
LMFFDT4011A	Set up, operate and maintain basic static woodworking machines for furniture designs	None
LMFFDT4012A	Produce ideation drawings	None

LMFFDT4013A	Research and select furniture finishes	None
LMFFDT4014A	Research and select furniture materials and technology	None
LMFFDT4015A	Research furniture styles and movements	None
LMFFDT4016A	Select, use and maintain hand tools for the creation of custom furniture	None
LMFFDT4017A	Set up and operate a wood turning lathe to produce off-centre work	None
LMFFDT4018A	Produce templates and jigs for custom made furniture	None
LMFFDT5001A	Apply ergonomics, anthropometrics and proxemic considerations to a product	None
LMFFDT5002A	Apply resources sustainably	None
LMFFDT5003A	Assess and resolve technical integrity of a design	None
LMFFDT5004A	Develop self as a furniture designer	None
LMFFDT5005A	Construct custom furniture using advanced techniques	None
LMFFDT5007A	Design a batch or limited production item of furniture	None
LMFFDT5008A	Design a furniture product using high volume technology services (HVTS) in production	None
LMFFDT5009A	Design a one-off item of furniture	None
LMFFDT5010A	Research and recommend alternative manufacturing processes	None
LMFFDT5011A	Research and recommend machine technology	None
LMFFDT5013A	Evaluate furniture design proposals and concepts	None
LMFFDT6001A	Assess economic impact of a design	None

LMFFDT6002A	Design for mass production	None
LMFFDT6003A	Evaluate and participate in design industry networks	None
LMFFDT6004A	Investigate legal requirements for design	None
LMFFDT6005A	Work collaboratively on a design project	None
LMFFF1001B	Complete a basic furniture finishing product	None
LMFFF2001B	Use furniture finishing sector hand and power tools	None
LMFFF2002B	Dismantle/re-assemble furniture	None
LMFFF2003B	Remove surface coatings	None
LMFFF2004B	Prepare surfaces for finishing	None
LMFFF2005B	Maintain spray equipment and booth	None
LMFFF2006B	Apply surface coatings by spray gun	None
LMFFF2007B	Apply stains, fillers and bleach	None
LMFFF2008B	Apply surface coatings by hand	None
LMFFF3001B	Match and make up colours	None
LMFFF3002B	Set up, operate and maintain mechanical coatings systems	None
LMFFF3003B	Apply plural component coatings	None
LMFFF3004B	Apply soft rubber techniques	None
LMFFF3005B	Enhance finishes	None
LMFFF3006B	Repair and touch up surfaces	None
LMFFF3007B	Apply graining and decorative finishes	None
LMFFF3008B	Apply traditional French polishing techniques	None
LMFFF3009B	Set up, operate and maintain CNC coating	None

	systems	
LMFFL1001A	Complete simple floor covering installation	None
LMFFL2001A	Use flooring technology sector hand and power tools	None
LMFFL2002A	Receive and prepare floor covering materials for installation	None
LMFFL2003A	Select, operate and maintain floor covering cutting machine	None
LMFFL2004A	Moisture test timber and concrete floors	None
LMFFL2101A	Remove existing floor coverings	None
LMFFL2102A	Prepare, select and apply smoothing and patching compounds	None
LMFFL2103A	Select and apply appropriate compounds and additives	None
LMFFL2104A	Prepare concrete sub-floors using wet cleaning methods	None
LMFFL2105A	Select, prepare and apply moisture barriers and damp proof membranes to concrete sub-floors	None
LMFFL2106A	Prepare walls for covering	None
LMFFL2107A	Select, operate and maintain grinding equipment	None
LMFFL2108A	Select, operate and maintain shot blasting equipment	None
LMFFL2109A	Select, operate and maintain demolition equipment	None
LMFFL2110A	Select, operate and maintain scarifying equipment	None
LMFFL2111A	Coarse sand timber flooring	None
LMFFL2112A	Install hard underlays	None

LMFFL2201A	Install carpet cushion/underlays and gripper accessories	None
LMFFL2202A	Install unpatterned tufted and bonded carpet floor coverings	None
LMFFL2203A	Install carpet tiles using standard installation procedures	None
LMFFL2204A	Install unpatterned tufted and bonded carpet floor coverings to stairs	None
LMFFL2301A	Install lay flat vinyl floor coverings	None
LMFFL2302A	Install resilient tiles using standard installation procedures	None
LMFFL2501A	Install laminate and engineered timber flooring	None
LMFFL2502A	Install impact and sound absorption underlay	None
LMFFL2503A	Nail strip timber flooring	None
LMFFL2504A	Install expansion joints	None
LMFFL2505A	Install mouldings and edge trims to timber flooring	None
LMFFL3001B	Plan and cost flooring technology work	None
LMFFL3002A	Establish and maintain a safe flooring technology work environment	None
LMFFL3101A	Inspect sub-floors	None
LMFFL3102A	Prepare, select and apply screed to concrete sub-floors	None
LMFFL3201A	Install carpet tiles using custom designs	None
LMFFL3202A	Install adhesive fixed carpet floor coverings	None
LMFFL3203A	Install commercial carpet floor coverings	None
LMFFL3204A	Install patterned carpet floor coverings	None

LMFFL3205A	Install custom design carpet and decorative finishes	None
LMFFL3206A	Install synthetic textile floor coverings to sports facilities	None
LMFFL3207A	Install carpet floor coverings to custom design stairs	None
LMFFL3301A	Install linoleum floor coverings	None
LMFFL3302A	Install commercial vinyl floor coverings	None
LMFFL3303A	Install resilient floor coverings using custom designs and decorative finishes	None
LMFFL3304A	Install resilient tiles using custom design and decorative finishes	None
LMFFL3305A	Install rubber floor coverings	None
LMFFL3306A	Install resilient sheet to walls	None
LMFFL3307A	Install resilient sheet to bench and countertops	None
LMFFL3308A	Install anti-static resilient floor coverings	None
LMFFL3309A	Install conductive resilient floor coverings	None
LMFFL3310A	Cut and install resilient floor coverings to stairs	None
LMFFL3401A	Mix and apply epoxy and seamless floor coverings	None
LMFFL3402A	Apply solvent based coatings to timber floors	None
LMFFL3403A	Apply water based coatings to timber floors	None
LMFFL3404A	Apply oil based coatings to timber floors	None
LMFFL3405A	Apply composite based coatings	None
LMFFL3406A	Apply emulsion wax coatings	None

LMFFL3407A	Apply stains and fillers	None
LMFFL3501A	Adapt and apply custom designs to timber flooring	None
LMFFL3502A	Cut and install timber flooring to stairs	None
LMFFL3503A	Install direct stick timber flooring	None
LMFFL3504A	Detect defective timber flooring	None
LMFFL3505A	Install block parquetry flooring	None
LMFFL3506A	Install cork tiles	None
LMFFL3507A	Install patterned parquetry	None
LMFFL3508A	Install sheet mosaic parquetry	None
LMFFL3509A	Install sprung timber flooring	None
LMFFL3510A	Install strip timber flooring onto battens	None
LMFFL3511A	Install strip flooring onto plywood	None
LMFFL3512A	Repair timber flooring	None
LMFFL3513A	Maintain timber, Laminate and engineered flooring	None
LMFFL3601A	Fine sand timber flooring	None
LMFFL3602A	Edge sand timber flooring	None
LMFFL3603A	Sand cork flooring	None
LMFFL3604A	Sand and fill parquetry flooring	None
LMFFL3605A	Apply finishes to cork flooring	None
LMFFM1001B	Construct a basic timber furnishing product	None
LMFFM1002B	Operate basic woodworking machines	None
LMFFM2001B	Use furniture making sector hand and power tools	None

LMFFM2002B	Assemble furnishing components	None
LMFFM2003B	Select and apply hardware	None
LMFFM2004B	Apply sheet laminates by hand	None
LMFFM2005B	Join solid timber	None
LMFFM2006B	Hand make timber joints	None
LMFFM2007B	Follow plans to assemble production furniture	None
LMFFM2008B	Bend and form cane	None
LMFFM2009B	Construct cane furniture	None
LMFFM2010B	Set up, operate and maintain basic static machines	None
LMFFM2011B	Apply manufactured board conversion techniques	None
LMFFM2012B	Set up, operate and maintain pressure and clamping machines	None
LMFFM3001B	Construct chair and couch frames	None
LMFFM3002B	Construct furniture using leg and rail method	None
LMFFM3003B	Produce angled and curved furniture using manufactured board	None
LMFFM3004B	Produce angled and curved furniture using solid timber	None
LMFFM3005B	Fabricate custom furniture	None
LMFFM3006B	Install furnishing products	None
LMFFM3007B	Prepare and apply decorative surfaces for furniture	None
LMFFM3010B	Select timbers for furniture production	None
LMFFM3011B	Produce manual and computer-aided production drawings	None

LMFFM3012B	Prepare cutting list from plans and job specifications	None
LMFFM3013B	Measure and draw site layout for manufactured furniture products	None
LMFFM3020B	Set up, operate and maintain sawing machines	None
LMFFM3021B	Set up, operate and maintain drilling machines	None
LMFFM3022B	Set up, operate and maintain joining machines	None
LMFFM3023B	Set up, operate and maintain planing and finishing machines	None
LMFFM3024B	Set up, operate and maintain multi-head planing and moulding machines	None
LMFFM3025B	Set up, operate and maintain routing and shaping machines	None
LMFFM3026B	Set up, operate and maintain mechanical wood turning lathes	None
LMFFM3027B	Set up, operate and maintain automated edge banding machines	None
LMFFM3028B	Fabricate synthetic solid surface products	None
LMFFM3030B	Set up, operate and maintain CNC sizing machines	None
LMFFM3031B	Set up, operate and maintain CNC machining and processing centres	None
LMFFM3032B	Produce and maintain cutting tools	None
LMFFM3033B	Construct jigs and fixtures	None
LMFFM4005A	Hand carve wood to custom design	None
LMFFM4006A	Construct joints for custom furniture	None
LMFFM4007A	Produce curved and shaped components for custom furniture	None

LMFFM4008A	Produce timber veneered components for custom furniture	None
LMFFT4001B	Coordinate on-site installation of furnishing products	None
LMFFT4002B	Customise stock lines	None
LMFFT4003B	Organise production processes	None
LMFFT4004B	Establish and monitor production inventory requirements	None
LMFFT4005B	Install and commission CNC software	None
LMFFT4006B	Construct prototypes and samples	None
LMFFT4007B	Sample, inspect and test products to specifications	None
LMFFT4008B	Interpret and use workplace information	None
LMFFT4009B	Match furnishing style/materials to customer requirements	None
LMFFT4010B	Identify and calculate production costs	None
LMFFT4011B	Purchase materials and consumables	None
LMFFT4012B	Prepare a tender submission	None
LMFFT5001B	Evaluate and select production materials and equipment	None
LMFFT5002B	Establish and develop production processes and area layout	None
LMFFT5003B	Manage installation and commissioning of equipment	None
LMFFT5004B	Develop and document procedures and specifications	None
LMFFT5005B	Organise enterprise maintenance programs	None
LMFFT5006B	Plan production	None
LMFFT5010B	Optimise CNC operations	None

LMFFT5011B	Develop, trial and evaluate prototypes	None
LMFFT5012B	Determine production feasibility of designs	None
LMFFT5013B	Develop products and related processes	None
LMFFT5014B	Establish and monitor business information systems	None
LMFFT5015B	Establish and implement contracts for external goods or services	None
LMFFT5016B	Establish customer contracts	None
LMFFT6001B	Research and evaluate products, materials and processes	None
LMFGG1001B	Complete a basic glass and glazing project	None
LMFGG2001B	Use glass and glazing sector hand and power tools	None
LMFGG2002B	Apply First Aid	None
LMFGG2003B	Operate glass freefall rack and table	None
LMFGG2004B	Process thin glass by hand	None
LMFGG2005B	Move glass sheets by hand	None
LMFGG2006B	Move single glass sheets by mechanical means	None
LMFGG2007B	Process glass by basic machines	None
LMFGG2008B	Glaze/re-glaze residential windows and doors	None
LMFGG2009B	Fabricate and assemble metal frames	None
LMFGG2010B	Fabricate and install insect and security screens	None
LMFGG3001B	Store and handle glass	None
LMFGG3002B	Assess glass and glazing requirements	None

LMFGG3003B	Move block/bulk glass sheet by mechanical means	None
LMFGG3004B	Process thick glass by hand	None
LMFGG3005B	Process glass by semi-automatic and automatic machines	None
LMFGG3006B	Apply film to glass	None
LMFGG3007B	Form glass	None
LMFGG3008B	Apply patterns and designs to glass	None
LMFGG3009B	Set up and operate glass laminating equipment	None
LMFGG3010B	Set up and operate glass toughening equipment	None
LMFGG3011B	Set up and operate glass silvering equipment	None
LMFGG3012B	Set up and operate insulated glass unit manufacturing equipment	None
LMFGG3013B	Construct and repair leadlight panels	None
LMFGG3014B	Prepare and install mirrors	None
LMFGG3015B	Fabricate and install shower screens and wardrobe doors	None
LMFGG3016B	Fabricate and install residential windows and doors	None
LMFGG3017B	Fabricate and install commercial glazing	None
LMFGG3018B	Prepare and install architectural engineered glazing	None
LMFGG3019B	Conduct commercial and structural glazing	None
LMFGN2002B	Move and store materials and products	None
LMFGN3001B	Read and interpret work documents	None

LMFGN3002B	Estimate and cost job	None
LMFID1001A	Plan the decoration of a simple space	None
LMFID3002A	Source and specify decoration products	None
LMFID3005A	Style a retail display	None
LMFID4001A	Research, analyse and apply colour for interior spaces	None
LMFID4002A	Decorate residential interiors	None
LMFID4003A	Prepare a materials board for client presentation	None
LMFID4004A	Research and recommend furniture and accessories	None
LMFID4005A	Research and recommend soft furnishings for interiors	None
LMFID4006A	Research and recommend hard materials and finishes for interiors	None
LMFID4007A	Identify materials, construction techniques and methods used in building interiors	None
LMFID4008A	Assess interior light and recommend light fittings	None
LMFID4009A	Research architectural styles and movements	None
LMFID4010A	Research interior decoration and design influences	None
LMFID4011A	Determine occupational health and safety implications of interior effects	None
LMFID5001A	Design residential interiors	None
LMFID5002A	Develop a decoration proposal for a complex site	None
LMFID5003A	Evaluate site for interior design brief	None
LMFID5004A	Specify structural elements, systems and	LMFID5003A

	services for interior spaces	
LMFID5005A	Explore and apply creative design methodology to interior space	None
LMFID5006A	Design interior lighting	LMFID4008A
LMFID5007A	Decorate for events	None
LMFID5008A	Design for people with disabilities and the elderly	None
LMFID5009A	Research and recommend colour and applied finishes	LMFID4001A
LMFID5010A	Provide interior styling service	None
LMFID5011A	Specify soft furnishings for complete interior solution	None
LMFID5012A	Research and recommend artwork	None
LMFID5013A	Design for small to medium scale commercial or institutional interiors	None
LMFID5014A	Use CAD applications to complete models and documentation for interior design projects	None
LMFID5015A	Decorate interiors for restoration projects	None
LMFID6001A	Resolve complex spatial design problems through modelling	None
LMFID6002A	Apply 3-D visualisation techniques to represent interior designs	LMFID5014A
LMFID6003A	Design for large scale commercial or institutional interiors	None
LMFID6004A	Design interiors for hospitality environments	None
LMFID6005A	Design for retail interiors	None
LMFID6006A	Design for conservation and restoration projects	None
LMFID6007A	Select and instruct consultants and	None

	contractors	
LMFID6008A	Evaluate design project outcomes	None
LMFID6009A	Produce digital presentations for commercial projects	LMFID5014A
LMFKB2001A	Prepare for cabinet installation	None
LMFKB2002A	Provide assistance in cabinet installation	None
LMFKB3001A	Identify processes in kitchen and bathroom projects	None
LMFKB3002A	Determine requirements for installation of cabinets	None
LMFKB3003A	Check and measure fit of cabinets	None
LMFKB3004A	Conduct on-site adjustments to cabinets and components	None
LMFKB3005A	Fabricate cabinets for the built-in environment	None
LMFKB3006A	Install fitted cabinets and components	None
LMFKB3007A	Provide advice on cabinet design features	None
LMFKB3008A	Identify cabinet construction and installation methods	None
LMFKB4001A	Determine spatial planning considerations for kitchen designs	None
LMFKB4002A	Research, recommend and specify materials, components and finishes for kitchen designs	None
LMFKB4003A	Identify and document services required to support kitchen and bathroom designs	None
LMFKB4004A	Determine spatial planning considerations for bathroom designs	None
LMFKB4005A	Research, recommend and specify materials, components and finishes for bathroom designs	None

LMFKB4006A	Prepare quotation and contract documentation for design project	None
LMFKB4007A	Design ancillary residential cabinetry	None
LMFKB4008A	Determine layout for laundry components	None
LMFMB1001B	Complete a basic mattress and base product	None
LMFMB2001B	Use mattress and base sector hand and power tools	None
LMFMB2002B	Prepare and assemble base unit	None
LMFMB2003B	Assemble mattress components	None
LMFMB2004B	Cut mattress and base fabrics	None
LMFMB3001B	Assemble springs for mattresses	None
LMFMB3002B	Make springs for mattresses and bases	None
LMFMB3003B	Set up, operate and maintain a tape edging machine	None
LMFMB3004B	Set up, operate and maintain a quilting machine	None
LMFMI3001A	Assemble instrument components	None
LMFMI3002A	Construct and apply decorative treatments and finishes to musical instruments	None
LMFMI3003A	Manufacture acoustic guitars	None
LMFMI3004A	Manufacture brass instruments	None
LMFMI3005A	Manufacture electric guitars	None
LMFMI3006A	Manufacture percussion instruments	None
LMFMI3007A	Manufacture special stringed instruments	None
LMFMI3008A	Manufacture stringed instruments	None
LMFMI3009A	Repair brass instruments	None

LMFMI3010A	Repair percussion instruments	None
LMFMI3011A	Repair woodwind instruments	None
LMFMI4001A	Repair acoustic guitars	None
LMFMI4002A	Repair electric guitars	None
LMFMI4003A	Repair special stringed instruments	None
LMFMI4004A	Repair stringed instruments	None
LMFPPF1001B	Frame a simple artwork	None
LMFPPF2001B	Use picture framing sector hand and power tools	None
LMFPPF2002B	Cut mouldings to length	None
LMFPPF2003B	Join mouldings	None
LMFPPF2004B	Mount artwork	None
LMFPPF2005B	Cut mat boards	None
LMFPPF2006B	Cut and handle glazing materials for framing	None
LMFPPF2007B	Assemble artwork package (basic)	None
LMFPPF2008B	Recognise and repair finishes of framing materials	None
LMFPPF3001B	Deframe artwork	None
LMFPPF3002B	Decorate mat boards	None
LMFPPF3003B	Set up and operate CNC machines	None
LMFPPF3004B	Prepare textiles for framing	None
LMFPPF3005B	Recognise and handle artwork for framing	None
LMFPPF3006B	Prepare design requirements for framing	None
LMFPPF3007B	Apply frame finishes	None
LMFPPF3008B	Assemble artwork package (complex)	None

LMFPP3009B	Install artwork	None
LMFPP4001B	Design and construct ornamental frames	None
LMFPP4002B	Determine and apply gilding techniques	None
LMFPT3001A	Develop knowledge of piano industry	None
LMFPT3002A	Select materials for piano repair and manufacture	None
LMFPT3003A	Repair upright and grand piano actions, keys and pedals	None
LMFPT3004A	Rebuild upright and grand piano actions, keys and pedals	None
LMFPT3005A	Re-string and re-pin a piano	None
LMFPT3006A	Regulate actions keys and pedals of upright pianos	None
LMFPT3007A	Regulate actions keys and pedals of grand pianos	None
LMFPT3008A	Understand piano tuning theory and basic acoustics	None
LMFPT3009A	Develop control of tuning hammers	None
LMFPT3010A	Pitch raise	LMFPT3007A
LMFPT3011A	Tune unisons aurally to a beatless condition	LMFPT3007A
LMFPT3012A	Tune octaves aurally to appropriate stretch	None
LMFPT3013A	Tune a temperament octave to produce an equally tempered scale	None
LMFPT3014A	Tune a piano aurally and-or electronically within time and accuracy constraints	(LMFPT3007A LMFPT3008A LMFPT3009A LMFPT3010A)
LMFPT3015A	Voice a piano	None
LMFPT3016A	Provide advice to customers on piano	None

	tuning and repair	
LMFSF1001B	Produce basic soft furnishing accessories	None
LMFSF2001B	Cut single layer fabrics	None
LMFSF2002B	Machine sew materials	None
LMFSF2003B	Machine sew using specific techniques	None
LMFSF2004B	Hand sew soft furnishings	None
LMFSF2005B	Operate a steam press	None
LMFSF2006B	Calculate fabric quantities for window coverings	None
LMFSF2007B	Construct unlined curtains/drapes	None
LMFSF2008B	Construct lined curtains/drapes	None
LMFSF2009B	Construct padded pelmets	None
LMFSF2010B	Make up tracks for window coverings	None
LMFSF2011B	Fit and adjust curtain hardware	None
LMFSF2012B	Fit and adjust interior blinds	None
LMFSF2013B	Dress windows	None
LMFSF2014B	Use soft furnishing sector hand and power tools	None
LMFSF3001B	Operate drop cutting machines	None
LMFSF3002B	Use automated curtain pleating equipment	None
LMFSF3003B	Follow patterns to produce window toppings	None
LMFSF3004B	Construct Roman-style blinds	None
LMFSF3005B	Construct Austrian/festoon-style blinds	None
LMFSF3006B	Chemically join textiles	None
LMFSF3007B	Lay out patterns and cut fabrics	None

LMFSF3008B	Measure up and calculate fabric quantities for window coverings	None
LMFSF3009B	Manufacture bedspreads	None
LMFSF3010B	Manufacture bed linen and table cloths	None
LMFSF3011B	Advise customers on interior decoration	None
LMFSF3012B	Install motorised curtains and blinds	None
LMFSF3013B	Follow patterns to produce soft furnishing accessories	None
LMFSF3014B	Provide technical advice to customers	None
LMFSL2001A	Assemble lead light and stained glass components	None
LMFSL3001A	Apply product and material knowledge to lead light and stained glass operations	None
LMFSL3002A	Paint glass	None
LMFSL3003A	Fire glass	None
LMFSL3004A	Protect stained glass and lead lighting	None
LMFSL3005A	Fabricate and install residential lead light and stained glass windows and doors	None
LMFSL3006A	Prepare and install architectural engineered lead light and stained glass	None
LMFSL5001A	Assess conservation requirements	None
LMFSL5002A	Remove heritage lead light and stained glass	None
LMFSL5003A	Conserve heritage lead light and stained glass	None
LMFSL5004A	Install heritage lead light and stained glass	None
LMFSL5005A	Apply innovation in contemporary lead light and stained glass	None
LMFSS2001A	Use security screens and grills hand and	None

	power tools	
LMFSS2002A	Rectify faults in product	None
LMFSS2003A	Prepare product for Australian Standards testing	None
LMFSS2004A	Undertake surface preparation	None
LMFSS3001A	Install and replace security screens and grills	None
LMFSS3002A	Apply patterns and designs to security screens and grills	None
LMFSS3003A	Resolve quality and compliance issues	None
LMFUP1001B	Complete a basic upholstery project	None
LMFUP2001B	Use upholstery sector hand and power tools	None
LMFUP2002B	Fit upholstery components	None
LMFUP2003B	Apply contemporary foundations to upholstered furniture	None
LMFUP2004B	Machine sew upholstery final cover materials (basic)	None
LMFUP2005B	Develop cutting plan and cut single layer upholstery fabric	None
LMFUP2006B	Dismantle/re-assemble furniture for upholstering	None
LMFUP3001B	Apply traditional foundations to upholstered furniture	None
LMFUP3002B	Fit and apply final cover materials to furniture using basic techniques	None
LMFUP3003B	Fit and apply final cover materials to furniture using decorative techniques	None
LMFUP3004B	Lay out patterns and cut leather	None
LMFUP3005B	Machine sew upholstery final cover materials (complex)	None

LMFUP3006B	Fit and apply leather to furniture	None
LMFUP3007B	Manufacture and fit loose covers	None
LMFUP3008B	Apply finishing techniques to upholstered furniture	None
LMFUP3009B	Develop cutting plan and cut multiple layer upholstery fabric	None
LMFUP3010B	Cut, sew and fit skirts to upholstered furniture	None
LMFUP3011B	Cut, sew and fit or fill cushions	None
LMFUP3012B	Apply marine sewing and installation techniques	None
LMFUP3013B	Cut and sew canvas and acrylics	None
LMFUP3014B	Set up, operate and maintain CNC cutting machines	None
BCG2007A	Operate Elevated Work Platforms (EWP)	TBA
BCGBC4037A	Prepare drawing for heritage works	BCG03
BSBADM311A	Maintain business resources	BSB07
BSBADV512A	Develop an advertising strategy and brief	TBA
BSBCCO304A	Provide sales solutions to customers	TBA
BSBCMM301A	Process customer complaints	BSB07
BSBCRT401A	Articulate, present and debate ideas	BSB07
BSBCRT402A	Collaborate in a creative process	BSB07
BSBCRT403A	Explore the history and social impact of creativity	BSB07
BSBCRT501A	Originate and develop concepts	BSB07
BSBCRT601A	Research and apply concepts and theories of creativity	BSB07
BSBCUS201A	Deliver a service to customers	BSB07

BSBCUS301A	Deliver and monitor a service to customers	BSB07
BSBCUS401A	Coordinate implementation of customer service strategies	BSB07
BSBCUS402A	Address customer needs	BSB07
BSBDES201A	Follow a design process	BSB07
BSBDES202A	Evaluate the nature of design in a specific industry context	BSB07
BSBDES301A	Explore the use of colour	BSB07
BSBDES302A	Explore and apply the creative design process to 2D forms	BSB07
BSBDES303A	Explore and apply the creative design process to 3D forms	BSB07
BSBDES304A	Source and apply design industry knowledge	BSB07
BSBDES305A	Source and apply information on the history and theory of design	BSB07
BSBDES401A	Generate design solutions	BSB07
BSBDES403A	Develop and extend design skills and practice	BSB07
BSBDES502A	Establish, negotiate and refine a design brief	BSB07
BSBDES601A	Manage design realisation	BSB07
BSBDES602A	Research global design trends	BSB07
BSBFIA301A	Maintain financial records	BSB07
BSBFLM309C	Support continuous improvement systems and processes	BSB07
BSBFLM312B	Contribute to team effectiveness	TBA
BSBINM601A	Manage knowledge and information	BSB07
BSBINN201A	Contribute to workplace innovation	BSB07

BSBITU101A	Operate a personal computer	BSB07
BSBITU306A	Design and produce business documents	BSB07
BSBMGT402A	Implement operational plan	BSB07
BSBMGT605B	Provide leadership across the organisation	BSB07
BSBMGT608A	Manage innovation and continuous improvement	BSB01
BSBMGT616A	Develop and implement strategic plans	BSB07
BSBMGT617A	Develop and implement a business plan	BSB07
BSBMKG413A	Promote products and services	BSB07
BSBMKG501B	Identify and evaluate marketing opportunities	BSB07
BSBMKG605B	Evaluate international marketing opportunities	BSB07
BSBMKG608A	Develop organisational marketing objectives	BSB07
BSBMKG609A	Develop a marketing plan	BSB07
BSBOHS407A	Monitor a safe workplace	BSB07
BSBPMG510A	Manage projects	BSB07
BSBPRO301A	Recommend products and services	BSB07
BSBPRO401A	Develop product knowledge	BSB07
BSBRKG304B	Maintain business records	BSB07
BSBRSK501A	Manage risk	BSB07
BSBSMB401A	Establish legal and risk management requirements of small business	BSB07
BSBSMB402A	Plan small business finances	BSB07
BSBSMB403A	Market the small business	BSB07
BSBSMB403A	Market the small business	BSB07

BSBSMB404A	Undertake small business planning	BSB07
BSBSMB405A	Monitor and manage small business operations	BSB07
BSBSMB406A	Manage small business finances	BSB07
BSBSMB406A	Manage small business finances	BSB07
BSBSMB407A	Manage a small team	BSB07
BSBSUS501A	Develop workplace policy and procedures for sustainability	BSB07
BSBWOR204A	Use business technology	BSB07
BSBWOR402A	Promote team effectiveness	BSB07
CPCCOHS1001A	Work safely in the construction industry	CPC08
CUFANM302A	Create 3D digital animations	CUF07
CUFANM303A	Create 3D digital models	CUF07
CUFANM502A	Create 3D digital environments	CUF07
CUFDIG303A	Produce and prepare photo images	CUF07
CUFDIG304A	Create visual design components	CUF07
CUFDIG507A	Design digital simulations	CUF07
CULMS010B	Contribute to the preservation of cultural material	CUL04
CUVCOR04B	Originate concept for own work and conduct critical discourse	CUV03
CUVCOR07B	Use drawing techniques to represent the object or idea	CUV03
CUVCOR08B	Produce drawings to represent and communicate the concept	CUV03
CUVCOR09B	Select and apply drawing techniques and media to represent and communicate the concept	CUV03

CUVCRS03B	Produce computer-aided drawings	CUV03
CUVCRS04B	Produce technical drawings	CUV03
CUVDES01A	Apply colour theory in response to a brief	TBA
CUVDSP07B	Research and apply techniques for graphic design	CUV03
CUVDSP11B	Research and apply techniques for illustrative work	CUV03
CUVDSP15B	Research and apply techniques for application to spatial design	CUV03
CUVICS04A	Originate and develop a concept	TBA
CUVVSP01B	Produce calligraphy	CUV03
CUVVSP02B	Research and experiment with techniques to produce calligraphy	CUV03
CUVVSP14B	Apply techniques to produce drawings	CUV03
CUVVSP15B	Produce drawings	CUV03
LMTTF2014A	Weld plastic materials	LMT07
LMTTF3004A	Perform advanced welding of plastic materials	LMT07
MEM05003B	Perform soft soldering	MEM05
MEM05007C	Perform manual heating and thermal cutting	MEM05
MEM05012C	Perform routine manual metal arc welding	MEM05
MEM05050B	Perform routine gas metal arc welding	MEM05
MEM06001B	Perform hand forging	MEM05
MEM15001B	Perform basic statistical quality control	MEM05
MEM16006A	Organise and communicate information	MEM05
MEM16007A	Work with others in a manufacturing, engineering or related environment	MEM05

MEM16008A	Interact with computing technology	MEM05
MEM16013A	Operate in a self-directed team	MEM05
MEM18001C	Use hand tools	MEM05
MEM30001A	Use computer aided drafting systems to produce basic engineering drawings	MEM05
MEM30004A	Use CAD to create and display 3D models	MEM05
MEM30024A	Participate in quality assurance techniques	MEM05
MSACMC210A	Manage the impact of change on own work	MSA07
MSACMC614A	Develop a communications strategy to support production	MSA07
MSACMS200A	Apply competitive manufacturing practices	MSA07
MSACMS201A	Sustain process improvements	MSA07
MSACMS601A	Analyse and map a value chain	MSA07
MSACMS602A	Manage a value chain	MSA07
MSACMS603A	Develop manufacturing related business plans	MSA07
MSACMT220A	Apply quick changeover procedures	MSA07
MSACMT221A	Apply Just in Time (JIT) procedures	MSA07
MSACMT230A	Apply cost factors to work practices	MSA07
MSACMT231A	Interpret product costs in terms of customer requirements	MSA07
MSACMT240A	Apply 5S procedures in a manufacturing environment	MSA07
MSACMT250A	Monitor process capability	MSA07
MSACMT251A	Apply quality standards	MSA07
MSACMT260A	Use planning software systems in	MSA07

	manufacturing	
MSACMT261A	Use SCADA systems in manufacturing	MSA07
MSACMT270A	Use sustainable energy practices	MSA07
MSACMT271A	Use sustainable environmental practices	MSA07
MSACMT280A	Undertake root cause analysis	MSA07
MSACMT281A	Contribute to the application of a proactive maintenance strategy	MSA07
MSACMT430A	Improve cost factors in work practices	MSA07
MSACMT432A	Analyse manual handling processes	MSA07
MSACMT450A	Undertake process capability improvements	MSA07
MSACMT452A	Apply statistics to processes in manufacturing	MSA07
MSACMT630A	Optimise cost of product	MSA07
MSACMT631A	Undertake value analysis of product costs in terms of customer requirements	MSA07
MSACMT650A	Determine and improve process capability	MSA07
MSACMT661A	Determine and establish information collection requirements and processes	MSA07
MSACMT675A	Facilitate the development of a new product	MSA07
MSAENV272B	Participate in environmentally sustainable work practices	MSA07
MSAENV472B	Implement and monitor environmentally sustainable work practices	MSA07
MSAENV672B	Develop workplace policy and procedures for environmental sustainability	MSA07
MSAPMOHS100A	Follow OHS procedures	MSA07
MSAPMOHS200A	Work safely	MSA07

MSAPMOPS101A	Make measurements	MSA07
MSAPMOPS363A	Organise on site work	MSA07
MSAPMPER200B	Work in accordance with an issued permit	TBA
MSAPMSUP102A	Communicate in the workplace	MSA07
MSAPMSUP106A	Work in a team	MSA07
MSAPMSUP201A	Receive or despatch goods	MSA07
MSAPMSUP240A	Undertake minor maintenance	MSA07
MSAPMSUP273A	Handle goods	MSA07
MSAPMSUP390A	Use structured problem solving tools	MSA07
PSPPROC602A	Direct the management of contracts	TBA
SIRRMER009A	Produce perspective drawings, plans and elevations	SIR07
SIRRMER020A	Create and implement exhibition space	SIR07
SIRRRPK010A	Recommend home and home improvement products and services	SIR07
SIRXINV002A	Maintain and order stock	SIR07
SIRXSLS004A	Build relationships with customers	SIR07
TLIA1107C	Package goods	TLI07
TLIA1307C	Receive goods	TLI07
TLIA1607C	Use inventory systems to organise stock control	TLI07
TLIA2107C	Despatch stock	TLI07
TLID1007C	Operate a forklift	TLI07
TLID207C	Shift a load using manually-operated equipment	TLI07
TLID307E	Handle dangerous goods/hazardous substances	TLI07

Summary mapping – LMF02v6

Changes to units of competency

New units of competency in LMF02v6

Code	Title	Details of change	Comment
LMFAH4001A	Recommend security technology, hardware and services	New unit	
LMFAH4002A	Prepare architectural door hardware schedules	New unit	
MSAENV272B	Participate in environmentally sustainable work practices	New to LMF02	
MSAPMSOHS100A	Follow OHS procedures	New to LMF02. Replaces LMFCR0001B	Equivalent

Updated imported units in LMF02v6

Code	Title	Details of change	Comment
MSAENV472B	Implement and monitor environmentally sustainable work practices	Updated from A version	Equivalent
MSAENV672B	Develop workplace policy and procedures for environmental sustainability	Updated from A version	Equivalent
TLID307E	Handle dangerous goods/hazardous substances	Updated from D version	Equivalent

Units not carried forward in LMF02v6

Code	Title	Details of change	Comment
LMFCR0001B	Follow safe working policies and practices	Replaced by MSAPMOHS100A <i>Follow OHS procedures</i>	Equivalent

Code	Title	Details of change	Comment
LMFCR0001 B	Follow safe working policies and practices	Replaced by MSAPMOHS100A <i>Follow OHS procedures</i>	Equivalent
LMFCR0002 B	Communicate in the workplace	Replaced by MSAPMSUP102A <i>Communicate in the workplace</i>	Equivalent
LMFCR0003 B	Carry out measurements and calculations	Replaced by MSAPMOPS <i>Make measurements</i>	Equivalent
LMFCR0004 B	Work effectively with others	Replaced by MSAPMSUP106A <i>Work in a team</i>	Equivalent

LMF02v6 – ISC upgrade changes to qualifications

All qualifications have been adjusted as follows:

to meet the 1/3 elective and 1/6 importation requirements

to include sustainability units in core and electives

imported units updated

LMF generic units replaced by MSA generic units

Note:

- Where a sustainability unit has been added to the core, one unit has been added to the total required to maintain the same elective choice.
- Overall qualification outcomes are considered equivalent – in all cases, the same units may be selected as chosen previously.

Code	Title	Details of change
LMF10108	Certificate I in Furnishing	Increase from 6 to 7 units - 4 core, 3 electives (1 import added). LMF generic units replaced with MSA generic units.
LMF20202	Certificate II in Furniture Finishing	Increase from 12 to 13 units – 8 core, 5 electives (2 imports). Ratio of core and electives changed to comply with 1/3 elective requirement. LMF generic units replaced with MSA generic units.
LMF20309	Certificate II in Furniture Making	Increase from 12 to 13 units – 5

Code	Title	Details of change
LMF10108	Certificate I in Furnishing	Increase from 6 to 7 units - 4 core, 3 electives (1 import added). LMF generic units replaced with MSA generic units.
		core, 8 electives. (3 imports). LMF generic units replaced with MSA generic units.
LMF20402	Certificate II in Glass and Glazing	Increase from 12 to 13 units – 5 core, 8 electives (3 imports). LMF generic units replaced with MSA generic units.
LMF20502	Certificate II in Mattress and Base Making	Increase from 12 to 13 units – 7 core, 6 electives (5 imports). LMF generic units replaced with MSA generic units.
LMF20602	Certificate II in Picture Framing	Increase from 12 to 13 units – 7 core, 6 electives (3 imports). LMF generic units replaced with MSA generic units.
LMF20702	Certificate II in Soft Furnishing	Increase from 12 to 13 units – 6 core, 7 electives (4 imports). LMF generic units replaced with MSA generic units.
LMF20802	Certificate II in Upholstery	Increase from 13 to 14 units – 7 core, 7 electives (4 imports). LMF generic units replaced with MSA generic units.
LMF20908	Certificate II in Flooring Technology	Increase from 13 to 14 units – 6 core, 8 electives (3 imports). LMF generic units replaced with MSA generic units.
LMF21008	Certificate II in Blinds and Awnings	Increase from 13 to 14 units – 6 core, 8 electives (3 imports). LMF generic units replaced with

Code	Title	Details of change
LMF10108	Certificate I in Furnishing	Increase from 6 to 7 units - 4 core, 3 electives (1 import added). LMF generic units replaced with MSA generic units.
		MSA generic units.
LMF21108	Certificate II in Security Screens and Grills	Increase from 12 to 13 units – 8 core, 5 electives (4 imports). LMF generic units replaced with MSA generic units.
LMF21208	Certificate II in Stained Glass and Lead Lighting	Increase from 12 to 13 units – 8 core, 5 electives (3 imports). LMF generic units replaced with MSA generic units.
LMF21308	Certificate II in Coopering	Increase from 12 to 13 units – 6 core, 7 electives (3 imports). LMF generic units replaced with MSA generic units.
LMF30202	Certificate III in Furniture Finishing	Increase from 22 to 23 units – 10 core, 13 electives (4 imports). LMF generic units replaced with MSA generic units.
LMF30302	Certificate III in Furniture Making	Increase from 27 to 28 units – 15 core, 13 electives (6 imports). LMF generic units replaced with MSA generic units.
LMF30502	Certificate III in Furniture Making (Wood Machining)	Increase from 26 to 27 units – 17 core, 10 imports (5 imports). LMF generic units replaced with MSA generic units.
LMF30602	Certificate III in Glass and Glazing	Increase from 23 to 24 units – 14 core, 10 electives (4 imports) LMF generic units replaced with MSA generic units.
LMF30702	Certificate III in Mattress and	Increase from 19 to 20 units – 12

Code	Title	Details of change
LMF10108	Certificate I in Furnishing	Increase from 6 to 7 units - 4 core, 3 electives (1 import added). LMF generic units replaced with MSA generic units.
	Base Making	core, 8 electives (5 imports) LMF generic units replaced with MSA generic units.
LMF30802	Certificate III in Picture Framing	Increase from 20 to 21 units – 14 core, 7 electives (4 imports) LMF generic units replaced with MSA generic units.
LMF30902	Certificate III in Soft Furnishing	Increase from 19 to 20 units – 6 core, 14 electives (5 imports) LMF generic units replaced with MSA generic units.
LMF31002	Certificate III in Upholstery	Increase from 24 to 25 units – 16 core, 9 electives (5 imports). LMF generic units replaced with MSA generic units.
LMF31102	Certificate III in Production Upholstery	Increase from 24 to 25 units – 16 core, 9 electives (5 imports). LMF generic units replaced with MSA generic units.
LMF31208	Certificate III in Flooring Technology	Increase from 24 to 25 units – 11 core, 14 electives (5 imports). LMF generic units replaced with MSA generic units.
LMF31308	Certificate III in Coopering	Increase from 24 to 25 units – 15 core, 10 electives (5 imports). LMF generic units replaced with MSA generic units.
LMF31408	Certificate III in Musical Instrument Making and Repair	Increase from 24 to 25 – 9 core, 16 electives (6 imports). LMF generic units replaced with

Code	Title	Details of change
LMF10108	Certificate I in Furnishing	Increase from 6 to 7 units - 4 core, 3 electives (1 import added). LMF generic units replaced with MSA generic units.
		MSA generic units.
LMF31508	Certificate III in Piano Technology	Increase from 24 to 25 units – 5 core, 20 electives (5 imports) LMF generic units replaced with MSA generic units.
LMF31608	Certificate III in Security Screens and Grills	Increase from 26 to 27 units – 15 core, 12 electives (10 imports). LMF generic units replaced with MSA generic units.
LMF31708	Certificate III in Stained Glass and Lead Lighting	Increase from 24-25 – 16 core, 9 electives (7 imports). LMF generic units replaced with MSA generic units.
LMF31808	Certificate III in Blinds and Awnings	Increase from 24 to 25 units – 15 core, 10 electives (5 imports). LMF generic units replaced with MSA generic units.
LMF31908	Certificate III in Interior Decoration (Retail Services)	Increase from 12 to 13 units – 4 core, 9 electives (3 imports). LMF generic units replaced with MSA generic units.
LMF32009	Certificate III in Kitchens and Bathrooms (Client Services)	Increase from 12 to 13 units – 8 core, 5 electives (3 imports) LMF generic units replaced with MSA generic units.
LMF32109	Certificate III in Cabinet Making	Increase from 27 to 28 units – 6 core, 22 electives (5 imports). LMF generic units replaced with MSA generic units.
LMF40202	Certificate IV in Furnishing	Increase from 18 to 19 units – 5

Code	Title	Details of change
LMF10108	Certificate I in Furnishing	Increase from 6 to 7 units - 4 core, 3 electives (1 import added). LMF generic units replaced with MSA generic units.
	Technology	core, 14 electives (5 imports) LMF generic units replaced with MSA generic units. New architectural hardware units added to electives.
LMF40308	Certificate IV in Musical Instrument Making and Repair	Increase from 18 to 19 units – 5 core, 14 electives (4 imports) LMF generic units replaced with MSA generic units.
LMF40408	Certificate IV in Interior Decoration	Increase from 18 to 19 units – 8 core, 11 electives (4 imports). Code for LMFFDT4012A corrected, LMFFDT4015A included in electives.
LMF40508	Certificate IV in Furniture Design and Technology	Increase from 18 to 19 units – 6 core, 13 electives (5 imports)
LMF40609	Certificate IV in Design of Kitchens, Bathrooms and Interior Spaces	No change to number required (20) – 13 core, 7 electives. 1 additional import to bring to the 3 required.
LMF50202	Diploma of Furnishing Technology	30 units required - 3 core, 27 electives (5 imports). Sustainability unit included in core. Reformatted to remove entry requirements and embed Certificate IV units.
LMF50308	Diploma of Stained Glass and Lead Lighting	25 units required - 11 core, 14 electives (5 imports). Sustainability unit included in core. Reformatted to remove entry requirements and embed Certificate IV units.
LMF50408	Diploma of Interior Design and Decoration	Increase from 28 to 29 units – 10 core, 19 electives.

Code	Title	Details of change
LMF10108	Certificate I in Furnishing	Increase from 6 to 7 units - 4 core, 3 electives (1 import added). LMF generic units replaced with MSA generic units.
		4 additional imports to bring to the 5 required.
LMF50508	Diploma of Furniture Design and Technology	Increase from 25 to 26 units – 8 core, 18 electives. 3 additional imports to bring to the 5 required.
LMF60102	Advanced Diploma of Furnishing Management	No change to packaging. Sustainability unit added to electives.
LMF60208	Advanced Diploma of Interior Design	Increase from 38 to 39 units – 14 core, 25 electives. 5 additional imports to bring to the 7 required. Code for LMFFDT4012A corrected, LMFFDT4015A included in electives
LMF60308	Advanced Diploma of Furniture Design and Technology	Increase from 35 to 36 units – 9 core, 27 electives. 5 additional imports to bring to the 7 required.

LMF02v5**New qualification**

LMF40609 Certificate IV in Design of Kitchens, Bathrooms and Interior Spaces

New units of competency in LMF02v5**New units**

LMFKB4001A Determine spatial planning considerations for kitchen designs

LMFKB4002A	Research, recommend and specify materials, components and finishes for kitchen designs
LMFKB4003A	Identify and document services required to support kitchen and bathroom designs
LMFKB4004A	Determine spatial planning considerations for bathroom designs
LMFKB4005A	Research, recommend and specify materials, components and finishes for bathroom designs
LMFKB4006A	Prepare quotation and contract documentation for design project
LMFKB4007A	Design ancillary residential cabinetry
LMFKB4008A	Determine layout for laundry components
BSBSMB403A	Market the small business
BSBCUS402	Address customer needs
BSBSMB406A	Manage small business finances
BSBMKG413A	Promote products and services

LMF05v4

Revised qualification	Change
LMF20309 Certificate II in Furniture Making	Replaces <i>LMF20302</i> . Modification of mandatory requirements and addition of 2 new units – equivalent in overall outcomes.
New qualifications	
LMF32009 Certificate III in Kitchens and Bathrooms (Client Services)	New qualification
LMF32109 Certificate III in Cabinet Making	Replaces <i>LMF30402 Certificate III in Furniture Making (Cabinet Making)</i> . New qualification based on LMF30402. Includes modification of mandatory requirements and addition of new units of competency for a new stream. There is partial equivalence for the furniture pathway.

New units of competency in LMF02v4

New LMF units	
LMFKB2001A	Prepare for cabinet installation
LMFKB2002A	Provide assistance in cabinet installation
LMFKB3001A	Identify processes in kitchen and bathroom projects
LMFKB3002A	Determine requirements for installation of cabinets
LMFKB3003A	Check and measure fit of cabinets
LMFKB3004A	Conduct on-site adjustments to cabinets and components
LMFKB3005A	Fabricate cabinets for the built-in environment
LMFKB3006A	Install fitted cabinets and components
LMFKB3007A	Provide advice on cabinet design features
LMFKB3008A	Identify cabinet construction and installation methods
New imported units	
BSBCCO304A	Provide sales solutions to customers
BSBCMM301A	Process customer complaints
BSBFIA301A	Maintain financial records
CPCCOHS1001A	Work safely in the construction industry
MSACMC210A	Manage the impact of change on own work
MSACMS200A	Apply competitive manufacturing practices
MSACMS201A	Sustain process improvements
MSACMT220A	Apply quick changeover procedures
MSACMT221A	Apply Just in Time (JIT) procedures
MSACMT240A	Apply 5S procedures in a manufacturing environment
MSACMT250A	Monitor process capability
MSACMT251A	Apply quality standards
MSACMT260A	Use planning software systems in manufacturing

MSACMT261A	Use SCADA systems in manufacturing
MSACMT270A	Use sustainable energy practices
MSACMT271A	Use sustainable environmental practices
MSACMT280A	Undertake root cause analysis
MSACMT281A	Contribute to the application of a proactive maintenance strategy
MSAPMOPS363A	Organise on site work
MSAPMPER200B	Work in accordance with an issued permit
MSAPMSUP102A	Communicate in the workplace
MSAPMSUP106A	Work in a team
MSAPMSUP201A	Receive or despatch goods
MSAPMSUP240A	Undertake minor maintenance
MSAPMSUP273A	Handle goods
MSAPMSUP390A	Use structured problem solving tools
SIRXINV002A	Maintain and order stock

Mapping of qualifications in LMF02v3

LMF02 Version 3 against Version 2

LMF10108 Certificate I in Furnishing	LMF10102 Certificate I in Furnishing	Modification – additional pathways.
LMF31908 Certificate III in Interior Decoration (Retail Services)		New qualification
LMF40408 Certificate IV in Interior Decoration		New qualification
LMF40508 Certificate IV in Furniture Design and Technology		New qualification
LMF50408 Diploma of Interior Design and Decoration		New qualification
LMF50508 Diploma of Furniture Design and		New qualification

Technology		
LMF60208 Advanced Diploma of Interior Design		New qualification
LMF60308 Advanced Diploma of Furniture Design and Technology		New qualification
Note		
Imported units have been updated in all qualifications carried forward from Version 2.		

Mapping of LMF02 Version 2 against LMF02 Version 1

LMF02 Version 2 Qualifications	Relationship to LMF02 Version 1 Qualifications
LMF10102 Certificate I in Furnishing	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF20202 Certificate II in Furniture Finishing	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF20302 Certificate II in Furniture Making	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF20402 Certificate II in Glass and Glazing	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF20502 Certificate II in Mattress and Base Making	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF20602 Certificate II in Picture Framing	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF20702 Certificate II in Soft Furnishing	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated. Qualification rules modified to comply with packaging protocols
LMF20802 Certificate II in	Clarified and reformatted for NTIS compliance,

Upholstery	employability skills components added and imported units updated.
LMF20908 Certificate II in Flooring Technology	New qualification. Replaces LMF20102 Certificate II in Floor Covering and Finishing but is not equivalent.
LMF21008 Certificate II in Blinds and Awnings	New qualification
LMF21108 Certificate II in Security Screens and Grills	New qualification
LMF21208 Certificate II in Stained Glass and Lead Lighting	New qualification
LMF21308 Certificate II in Coopering	New qualification
LMF30202 Certificate III in Furniture Finishing	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF30302 Certificate III in Furniture Making	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF30402 Certificate III in Furniture Making (Cabinet Making)	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF30502 Certificate III in Furniture Making (Wood Machining)	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF30602 Certificate III in Glass and Glazing	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF30702 Certificate III in Mattress and Base Making	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF30802 Certificate III in Picture Framing	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF30902 Certificate III in Soft Furnishing	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.

	Qualification rules modified to comply with packaging protocols.
LMF31002 Certificate III in Upholstery	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF31102 Certificate III in Production Upholstery	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF31208 Certificate III in Flooring Technology	New qualification. Replaces LMF30102 Certificate III in Floor Covering and Finishing but is not equivalent.
LMF31308 Certificate III in Coopering	New qualification
LMF31408 Certificate III in Musical Instrument Making and Repair	New qualification
LMF31508 Certificate III in Piano Technology	New qualification
LMF31608 Certificate III in Security Screens and Grills	New qualification
LMF31708 Certificate III in Stained Glass and Lead Lighting	New qualification
LMF31808 Certificate III in Blinds and Awnings	New qualification
LMF40202 Certificate IV in Furnishing Technology	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF40308 Certificate IV in Musical Instrument Making and Repair	New qualification
LMF50202 Diploma of Furnishing Technology	Clarified and reformatted for NTIS compliance, employability skills components added and imported units updated.
LMF50308 Diploma of Stained Glass and Lead Lighting	New qualification
LMF60102 Advanced Diploma of Furnishing Management	Clarified and reformatted for NTIS compliance, employability skills components added and imported

units updated.

Mapping of units of competency - LMF02v3 to LMF02v2

LMFID1001A Plan the decoration of a simple space	New unit
LMFID3002A Source and specify decoration products	New unit
LMFID3005A Style a retail display	New unit
LMFID4001A Research, analyse and apply colour for interior spaces	New unit
LMFID4002A Decorate residential interiors	New unit
LMFID4003A Prepare a materials board for client presentation	New unit
LMFID4004A Research and recommend furniture and accessories	New unit
LMFID4005A Research and recommend soft furnishings for interiors	New unit
LMFID4006A Research and recommend hard materials and finishes for interiors	New unit
LMFID4007A Identify materials, construction techniques and methods used in building interiors	New unit
LMFID4008A Assess interior light and recommend light fittings	New unit
LMFID4009A Research architectural styles and movements	New unit
LMFID4010A Research interior decoration and design influences	New unit
LMFID4011A Determine occupational health and safety implications of interior effects	New unit
LMFID5001A Design residential interiors	New unit
LMFID5002A Develop a decoration proposal for a complex site	New unit
LMFID5003A Evaluate site for interior design brief	New unit
LMFID5004A Specify structural elements, systems and services for interior spaces	New unit
LMFID5005A Explore and apply creative design methodology to	New unit

interior space

LMFID5006A Design interior lighting	New unit
LMFID5007A Decorate for events	New unit
LMFID5008A Design for people with disabilities and the elderly	New unit
LMFID5009A Research and recommend colour and applied finishes	New unit
LMFID5010A Provide interior styling service	New unit
LMFID5011A Specify soft furnishings for complete interior solution	New unit
LMFID5012A Research and recommend artwork	New unit
LMFID5013A Design for small to medium scale commercial or institutional interiors	New unit
LMFID5014A Use CAD applications to complete models and documentation for interior design projects	New unit
LMFID5015A Decorate interiors for restoration projects	New unit
LMFID6001A Resolve complex spatial design problems through modelling	New unit
LMFID6002A Apply 3-D visualisation techniques to represent interior designs	New unit
LMFID6003A Design for large scale commercial or institutional interiors	New unit
LMFID6004A Design interiors for hospitality environments	New unit
LMFID6005A Design for retail interiors	New unit
LMFID6006A Design for conservation and restoration projects	New unit
LMFID6007A Select and instruct consultants and contractors	New unit
LMFID6008A Evaluate design project outcomes	New unit
LMFID6009A Produce digital presentations for commercial projects	New unit
LMFFDT4001A Apply finishing techniques to custom furniture	New unit

LMFFDT4002A Assemble custom furniture	New unit
LMFFDT4003A Assess and record the lifecycle of a product	New unit
LMFFDT4004A Assess environmental impact of a design	New unit
LMFFDT4005A Construct and evaluate furniture prototypes and samples	New unit
LMFFDT4006A Establish and maintain a safe furniture making work environment	New unit
LMFFDT4007A Establish the design brief	New unit
LMFFDT4008A Determine occupational health and safety implications of designs	New unit
LMFFDT4009A Prepare and present furniture design information	New unit
LMFFDT4010A Produce and evaluate developmental furniture models to scale	New unit
LMFFDT4011A Set up, operate and maintain basic static woodworking machines for furniture designs	New unit
LMFFDT4012A Produce ideation drawings	New unit
LMFFDT4013A Research and select furniture finishes	New unit
LMFFDT4014A Research and select furniture materials and technology	New unit
LMFFDT4015A Research furniture styles and movements	New unit
LMFFDT4016A Select, use and maintain hand tools for the creation of custom furniture	New unit
LMFFDT4017A Set up and operate a wood turning lathe to produce off-centre work	New unit
LMFFDT4018A Produce templates and jigs for custom made furniture	New unit
LMFFDT5001A Apply ergonomics, anthropometrics and proxemic considerations to a product	New unit
LMFFDT5002A Apply resources sustainably	New unit
LMFFDT5003A Assess and resolve technical integrity of a design	New unit

LMFFDT5004A Develop self as a furniture designer	New unit
LMFFDT5005A Construct custom furniture using advanced techniques	New unit
LMFFDT5007A Design a batch or limited production item of furniture	New unit
LMFFDT5008A Design a furniture product using high volume technology services (HVTs) in production	New unit
LMFFDT5009A Design a one-off item of furniture	New unit
LMFFDT5010A Research and recommend alternative manufacturing processes	New unit
LMFFDT5011A Research and recommend machine technology	New unit
LMFFDT5013A Evaluate furniture design proposals and concepts	New unit
LMFFDT6001A Assess economic impact of a design	New unit
LMFFDT6002A Design for mass production	New unit
LMFFDT6003A Evaluate and participate in design industry networks	New unit
LMFFDT6004A Investigate legal requirements for design	New unit
LMFFDT6005A Work collaboratively on a design project	New unit

New imported units version 3

Training Package source

BCGBC4037A Prepare drawing for heritage works	BCG03 General Construction
BSBADV512A Create an advertising brief	BSB07 Business Services
BSBCRT401A Articulate, present and debate ideas	BSB07 Business Services
BSBCRT402A Collaborate in a creative process	BSB07 Business Services
BSBCRT403A Explore the history and social impact of creativity	BSB07 Business Services
BSBCRT501A Originate and develop concepts	BSB07 Business Services
BSBCRT601A Research and apply concepts and theories of creativity	BSB07 Business Services

BSBDES201A Follow a design process	BSB07 Business Services
BSBDES202A Evaluate the nature of design in a specific industry context	BSB07 Business Services
BSBDES301A Explore the use of colour	BSB07 Business Services
BSBDES302A Explore and apply the creative design process to 2D forms	BSB07 Business Services
BSBDES303A Explore and apply the creative design process to 3D forms	BSB07 Business Services
BSBDES304A Source and apply design industry knowledge	BSB07 Business Services
BSBDES305A Source and apply information on the history and theory of design	BSB07 Business Services
BSBDES401A Generate design solutions	BSB07 Business Services
BSBDES403A Develop and extend design skills and practice	BSB07 Business Services
BSBDES502A Establish, negotiate and refine a design brief	BSB07 Business Services
BSBDES601A Manage design realisation	BSB07 Business Services
BSBDES602A Research global design trends	BSB07 Business Services
BSBMGT402A Implement operational plan	BSB07 Business Services
BSBMKG501B Identify and evaluate marketing opportunities	BSB07 Business Services
BSBMKG605B Evaluate international marketing opportunities	BSB07 Business Services
BSBMKG608A Develop organisational marketing objectives	BSB07 Business Services
BSBMKG609A Develop a marketing plan	BSB07 Business Services
BSBPMG510A Manage projects	BSB07 Business Services
BSBWOR204A Use business technology	BSB07 Business Services
CUFANM302A Create 3D animations	CUF07 Screen and Media
CUFANM303A Create digital 3D models	CUF07 Screen and Media
CUFANM502A Create digital 3D environments	CUF07 Screen and Media
CUFDIG303A Produce and prepare photo images	CUF07 Screen and Media

CUFDIG304A Create visual design components	CUF07 Screen and Media
CUFDIG507A Design digital simulations	CUF07 Screen and Media
CUVCRS03B Produce computer-aided drawings	CUV03 Visual Arts, Craft & Design
CUVCRS04B Produce technical drawings	CUV03 Visual Arts, Craft & Design
CUVDSP11B Research and apply techniques for illustrative work	CUV03 Visual Arts, Craft & Design
MEM15001B Perform basic statistical quality control	MEM05 Metal and Engineering
MEM16006A Organise and communicate information	MEM05 Metal and Engineering
MEM16007A Work with others in a manufacturing, engineering or related environment	MEM05 Metal and Engineering
MEM16008A Interact with computing technology	MEM05 Metal and Engineering
MEM16013A Operate in a self directed team	MEM05 Metal and Engineering
MEM30001A Use computer aided drafting systems to product basic engineering drawings	MEM05 Metal and Engineering
MEM30004A Use CAD to create and display 3D models	MEM05 Metal and Engineering
MEM30024A Participate in quality assurance techniques	MEM05 Metal and Engineering
MSACMC614A Develop a communications strategy to support production	MSA07 Manufacturing
MSACMS601A Analyse and map a value chain	MSA07 Manufacturing
MSACMS602A Manage a value chain	MSA07 Manufacturing
MSACMS603A Develop manufacturing related business plans	MSA07 Manufacturing
MSACMT230A Apply cost factors to work practices	MSA07 Manufacturing
MSACMT430A Improve cost factors in work practices	MSA07 Manufacturing

MSACMT450A Undertake process capability improvements	MSA07 Manufacturing
MSACMT452A Apply statistics to processes in manufacturing	MSA07 Manufacturing
MSACMT630A Optimise cost of product	MSA07 Manufacturing
MSACMT631A Undertake value analysis of product costs in terms of customer requirements	MSA07 Manufacturing
MSACMT650A Determine and improve process capability	MSA07 Manufacturing
MSACMT661A Determine and establish information collection requirements and processes	MSA07 Manufacturing
MSACMT675A Facilitate the development of a new product	MSA07 Manufacturing
MSAENV472A Implement and monitor environmentally sustainable work practices	MSA07 Manufacturing
MSAENV672A Develop workplace policy and procedures for sustainability	MSA07 Manufacturing
MSAPMOHS200A Work safely	MSA07 Manufacturing
PSPPROC602A Direct the management of contracts	PSP04 Public Sector
SIRRMER009A Produce perspective drawings, plans and elevations	SIR07 Retail Services
SIRRMER020A Create and implement exhibition space	SIR07 Retail Services
SIRRRPK010A Recommend home and home improvement products and services	SIR07 Retail Services
SIRXSL004A Build relationships with customers	SIR07 Retail Services

Units in LMF02 Version 2

Relationship to units in LMF02 Version 1

LMFCR0001B	Follow safe working policies and practices	Reformatted with Employability skills statement added
LMFCR0002B	Communicate in the workplace	Reformatted with ES added
LMFCR0003B	Carry out measurements and calculations	Reformatted with ES added
LMFCR0004B	Work effectively with others	Reformatted with ES added
LMFGN2002B	Move and store materials and products	Reformatted with ES added
LMFGN3001B	Read and interpret work documents	Reformatted with ES added
LMFGN3002B	Estimate and cost job	Reformatted with ES added
LMFDN4001B	Produce drawings from design concepts	Reformatted with ES added
LMFDN4002B	Produce line and component production drawings	Reformatted with ES added
LMFDN4003B	Produce patterns and/or templates	Reformatted with ES added
LMFDN4004B	Design, construct and test jigs	Reformatted with ES added
LMFDN4005B	Work within a furniture design team	Reformatted with ES added
LMFDN5001B	Generate and transfer complex computer-aided drawings and specifications	Reformatted with ES added
LMFDN5006B	Manage furniture design	Reformatted with ES added
LMFFT4001B	Coordinate on-site installation of furnishing products	Reformatted with ES added
LMFFT4002B	Customise stock lines	Reformatted with ES added
LMFFT4003B	Organise production processes	Reformatted with ES added
LMFFT4004B	Establish and monitor production inventory requirements	Reformatted with ES added
LMFFT4005B	Install and commission CNC software	Reformatted with ES added
LMFFT4006B	Construct prototypes and samples	Reformatted with ES added
LMFFT4008B	Sample, inspect and test products to specifications	Reformatted with ES added
LMFFT4008B	Interpret and use workplace information	Reformatted with ES added

LMFFT4009B	Match furnishing style/materials to customer requirements	Reformatted with ES added
LMFFT4010B	Identify and calculate production costs	Reformatted with ES added
LMFFT4011B	Purchase materials and consumables	Reformatted with ES added
LMFFT4012B	Prepare a tender submission	Reformatted with ES added
LMFFT5001B	Evaluate and select production materials and equipment	Reformatted with ES added
LMFFT5002B	Establish and develop production processes and area layout	Reformatted with ES added
LMFFT5003B	Manage installation and commissioning of equipment	Reformatted with ES added
LMFFT5004B	Develop and document procedures and specifications	Reformatted with ES added
LMFFT5005B	Organise enterprise maintenance programs	Reformatted with ES added
LMFFT5006B	Plan production	Reformatted with ES added
LMFFT5010B	Optimise CNC operations	Reformatted with ES added
LMFFT5011B	Develop, trial and evaluate prototypes	Reformatted with ES added
LMFFT5012B	Determine production feasibility of designs	Reformatted with ES added
LMFFT5013B	Develop products and related processes	Reformatted with ES added
LMFFT5014B	Establish and monitor business information systems	Reformatted with ES added
LMFFT5015B	Establish and implement contracts for external goods or services	Reformatted with ES added
LMFFT5016B	Establish customer contracts	Reformatted with ES added
LMFFT6001B	Research and evaluate products, materials and processes	Reformatted with ES added
LMFFF1001B	Complete a basic furniture finishing product	Reformatted with ES added
LMFFF2001B	Use furniture finishing sector hand and power tools	Reformatted with ES added
LMFFF2002B	Dismantle/re-assemble furniture	Reformatted with ES added

LMFFF2003B	Remove surface coatings	Reformatted with ES added
LMFFF2004B	Prepare surfaces for finishing	Reformatted with ES added
LMFFF2005B	Maintain spray equipment and booth	Reformatted with ES added
LMFFF2006B	Apply surface coatings by spray gun	Reformatted with ES added
LMFFF2007B	Apply stains, fillers and bleach	Reformatted with ES added
LMFFF2008B	Apply surface coatings by hand	Reformatted with ES added
LMFFF3001B	Match and make up colours	Reformatted with ES added
LMFFF3002B	Set up, operate and maintain mechanical coatings systems	Reformatted with ES added
LMFFF3003B	Apply plural component coatings	Reformatted with ES added
LMFFF3004B	Apply soft rubber techniques	Reformatted with ES added
LMFFF3005B	Enhance finishes	Reformatted with ES added
LMFFF3006B	Repair and touch up surfaces	Reformatted with ES added
LMFFF3007B	Apply graining and decorative finishes	Reformatted with ES added
LMFFF3008B	Apply traditional French polishing techniques	Reformatted with ES added
LMFFF3009B	Set up, operate and maintain CNC coating systems	Reformatted with ES added
LMFFM1001B	Construct a basic timber furnishing product	Reformatted with ES added
LMFFM1002B	Operate basic woodworking machines	Reformatted with ES added
LMFFM2001B	Use furniture making sector hand and power tools	Reformatted with ES added
LMFFM2002B	Assemble furnishing components	Reformatted with ES added
LMFFM2003B	Select and apply hardware	Reformatted with ES added
LMFFM2004B	Apply sheet laminates by hand	Reformatted with ES added
LMFFM2005B	Join solid timber	Reformatted with ES added
LMFFM2006B	Hand make timber joints	Reformatted with ES added
LMFFM2007B	Follow plans to assemble production furniture	Reformatted with ES added

LMFFM2008B	Bend and form cane	Reformatted with ES added
LMFFM2009B	Construct cane furniture	Reformatted with ES added
LMFFM2010B	Set up, operate and maintain basic static machines	Reformatted with ES added
LMFFM2011B	Apply manufactured board conversion techniques	Reformatted with ES added
LMFFM2012B	Set up, operate and maintain pressure and clamping machines	Reformatted with ES added
LMFFM3001B	Construct chair and couch frames	Reformatted with ES added
LMFFM3002B	Construct furniture using leg and rail method	Reformatted with ES added
LMFFM3003B	Produce angled and curved furniture using manufactured board	Reformatted with ES added
LMFFM3004B	Produce angled and curved furniture using solid timber	Reformatted with ES added
LMFFM3005B	Fabricate custom furniture	Reformatted with ES added
LMFFM3006B	Install furnishing products	Reformatted with ES added
LMFFM3007B	Prepare and apply decorative surfaces for furniture	Reformatted with ES added
LMFFM3010B	Select timbers for furniture production	Reformatted with ES added
LMFFM3011B	Produce manual and computer-aided production drawings	Reformatted with ES added
LMFFM3012B	Prepare cutting list from plans and job specifications	Reformatted with ES added
LMFFM3013B	Measure and draw site layout for manufactured furniture products	Reformatted with ES added
LMFFM3020B	Set up, operate and maintain sawing machines	Reformatted with ES added
LMFFM3021B	Set up, operate and maintain drilling machines	Reformatted with ES added
LMFFM3022B	Set up, operate and maintain joining machines	Reformatted with ES added
LMFFM3023B	Set up, operate and maintain planing and finishing machines	Reformatted with ES added

LMFFM3024B	Set up, operate and maintain multi-head planing and moulding machines	Reformatted with ES added
LMFFM3025B	Set up, operate and maintain routing and shaping machines	Reformatted with ES added
LMFFM3026B	Set up, operate and maintain mechanical wood turning lathes	Reformatted with ES added
LMFFM3027B	Set up, operate and maintain automated edge banding machines	Reformatted with ES added
LMFFM3028B	Fabricate synthetic solid surface products	Reformatted with ES added
LMFFM3030B	Set up, operate and maintain CNC sizing machines	Reformatted with ES added
LMFFM3031B	Set up, operate and maintain CNC machining and processing centres	Reformatted with ES added
LMFFM3032B	Produce and maintain cutting tools	Reformatted with ES added
LMFFM3033B	Construct jigs and fixtures	Reformatted with ES added
LMFFM4005A	Hand carve wood to custom design	New unit
LMFFM4006A	Construct joints for custom furniture	New unit
LMFFM4007A	Produce curved and shaped components for custom furniture	New unit
LMFFM4008A	Produce timber veneered components for custom furniture	New unit
LMFGG1001B	Complete a basic glass and glazing project	Reformatted with ES added
LMFGG2001B	Use glass and glazing sector hand and power tools	Reformatted with ES added
LMFGG2002B	Apply First Aid	Reformatted with ES added
LMFGG2003B	Operate glass freefall rack and table	Reformatted with ES added
LMFGG2004B	Process thin glass by hand	Reformatted with ES added
LMFGG2005B	Move glass sheets by hand	Reformatted with ES added
LMFGG2006B	Move single glass sheets by mechanical means	Reformatted with ES added
LMFGG2007B	Process glass by basic machines	Reformatted with ES added

LMFGG2008B	Glaze/reglaze residential windows and doors	Reformatted with ES added
LMFGG2009B	Fabricate and assemble metal frames	Reformatted with ES added
LMFGG2010B	Fabricate and install insect and security screens	Reformatted with ES added
LMFGG3001B	Store and handle glass	Reformatted with ES added
LMFGG3002B	Assess glass and glazing requirements	Reformatted with ES added
LMFGG3003B	Move block/bulk glass sheet by mechanical means	Reformatted with ES added
LMFGG3004B	Process thick glass by hand	Reformatted with ES added
LMFGG3005B	Process glass by semi-automatic and automatic machines	Reformatted with ES added
LMFGG3006B	Apply film to glass	Reformatted with ES added
LMFGG3007B	Form glass	Reformatted with ES added
LMFGG3008B	Apply patterns and designs to glass	Reformatted with ES added
LMFGG3009B	Set up and operate glass laminating equipment	Reformatted with ES added
LMFGG3010B	Set up and operate glass toughening equipment	Reformatted with ES added
LMFGG3011B	Set up and operate glass silvering equipment	Reformatted with ES added
LMFGG3012B	Set up and operate insulated glass unit manufacturing equipment	Reformatted with ES added
LMFGG3013B	Construct and repair leadlight panels	Reformatted with ES added
LMFGG3014B	Prepare and install mirrors	Reformatted with ES added
LMFGG3015B	Fabricate and install shower screens and wardrobe doors	Reformatted with ES added
LMFGG3016B	Fabricate and install residential windows and doors	Reformatted with ES added
LMFGG3017B	Fabricate and install commercial glazing	Reformatted with ES added
LMFGG3018B	Prepare and install architectural engineered glazing	Reformatted with ES added

LMFGG3019B	Conduct commercial and structural glazing	Reformatted with ES added
LMFMB1001B	Complete a basic mattress and base product	Reformatted with ES added
LMFMB2001B	Use mattress and base sector hand and power tools	Reformatted with ES added
LMFMB2002B	Prepare and assemble base unit	Reformatted with ES added
LMFMB2003B	Assemble mattress components	Reformatted with ES added
LMFMB2004B	Cut mattress and base fabrics	Reformatted with ES added
LMFMB3001B	Assemble springs for mattresses	Reformatted with ES added
LMFMB3002B	Make springs for mattresses and bases	Reformatted with ES added
LMFMB3003B	Set up, operate and maintain a tape edging machine	Reformatted with ES added
LMFMB3004B	Set up, operate and maintain a quilting machine	Reformatted with ES added
LMFPPF1001B	Frame a simple artwork	Reformatted with ES added
LMFPPF2001B	Use picture framing sector hand and power tools	Reformatted with ES added
LMFPPF2002B	Cut mouldings to length	Reformatted with ES added
LMFPPF2003B	Join mouldings	Reformatted with ES added
LMFPPF2004B	Mount artwork	Reformatted with ES added
LMFPPF2005B	Cut mat boards	Reformatted with ES added
LMFPPF2006B	Cut and handle glazing materials for framing	Reformatted with ES added
LMFPPF2007B	Assemble artwork package (basic)	Reformatted with ES added
LMFPPF2008B	Recognise and repair finishes of framing materials	Reformatted with ES added
LMFPPF3001B	Deframe artwork	Reformatted with ES added
LMFPPF3002B	Decorate mat boards	Reformatted with ES added
LMFPPF3003B	Set up and operate CNC machines	Reformatted with ES added
LMFPPF3004B	Prepare textiles for framing	Reformatted with ES added

LMFPPF3005B	Recognise and handle artwork for framing	Reformatted with ES added
LMFPPF3006B	Prepare design requirements for framing	Reformatted with ES added
LMFPPF3007B	Apply frame finishes	Reformatted with ES added
LMFPPF3008B	Assemble artwork package (complex)	Reformatted with ES added
LMFPPF3009B	Install artwork	Reformatted with ES added
LMFPPF4001B	Design and construct ornamental frames	Reformatted with ES added
LMFPPF4002B	Determine and apply gilding techniques	Reformatted with ES added
LMFSF1001B	Produce basic soft furnishing accessories	Reformatted with ES added
LMFSF2001B	Cut single layer fabrics	Reformatted with ES added
LMFSF2002B	Machine sew materials	Reformatted with ES added
LMFSF2003B	Machine sew using specific techniques	Reformatted with ES added
LMFSF2004B	Hand sew soft furnishings	Reformatted with ES added
LMFSF2005B	Operate a steam press	Reformatted with ES added
LMFSF2006B	Calculate fabric quantities for window coverings	Reformatted with ES added
LMFSF2007B	Construct unlined curtains/drapes	Reformatted with ES added
LMFSF2008B	Construct lined curtains/drapes	Reformatted with ES added
LMFSF2009B	Construct padded pelmets	Reformatted with ES added
LMFSF2010B	Make up tracks for window coverings	Reformatted with ES added
LMFSF2011B	Fit and adjust curtain hardware	Reformatted with ES added
LMFSF2012B	Fit and adjust interior blinds	Reformatted with ES added
LMFSF2013B	Dress windows	Reformatted with ES added
LMFSF2014B	Use soft furnishing sector hand and power tools	Reformatted with ES added
LMFSF3001B	Operate drop cutting machines	Reformatted with ES added
LMFSF3002B	Use automated curtain pleating equipment	Reformatted with ES added

LMFSF3003B	Follow patterns to produce window toppings	Reformatted with ES added
LMFSF3004B	Construct Roman-style blinds	Reformatted with ES added
LMFSF3005B	Construct Austrian/festoon-style blinds	Reformatted with ES added
LMFSF3006B	Chemically join textiles	Reformatted with ES added
LMFSF3007B	Lay out patterns and cut fabrics	Reformatted with ES added
LMFSF3008B	Measure up and calculate fabric quantities for window coverings	Reformatted with ES added
LMFSF3009B	Manufacture bedspreads	Reformatted with ES added
LMFSF3010B	Manufacture bed linen and table cloths	Reformatted with ES added
LMFSF3011B	Advise customers on interior decoration	Reformatted with ES added
LMFSF3012B	Install motorised curtains and blinds	Reformatted with ES added
LMFSF3013B	Follow patterns to produce soft furnishing accessories	Reformatted with ES added
LMFSF3014B	Provide technical advice to customers	Reformatted with ES added
LMFUP1001B	Complete a basic upholstery project	Reformatted with ES added
LMFUP2001B	Use upholstery sector hand and power tools	Reformatted with ES added
LMFUP2002B	Fit upholstery components	Reformatted with ES added
LMFUP2003B	Apply contemporary foundations to upholstered furniture	Reformatted with ES added
LMFUP2004B	Machine sew upholstery final cover materials (basic)	Reformatted with ES added
LMFUP2005B	Develop cutting plan and cut single layer upholstery fabric	Reformatted with ES added
LMFUP2006B	Dismantle/re-assemble furniture for upholstery	Reformatted with ES added
LMFUP3001B	Apply traditional foundations to upholstered furniture	Reformatted with ES added
LMFUP3002B	Fit and apply final cover materials to furniture using basic techniques	Reformatted with ES added

LMFUP3003B	Fit and apply final cover materials to furniture using decorative techniques	Reformatted with ES added
LMFUP3004B	Lay out patterns and cut leather	Reformatted with ES added
LMFUP3005B	Machine sew upholstery final cover materials (complex)	Reformatted with ES added
LMFUP3006B	Fit and apply leather to furniture	Reformatted with ES added
LMFUP3007B	Manufacture and fit loose covers	Reformatted with ES added
LMFUP3008B	Apply finishing techniques to upholstered furniture	Reformatted with ES added
LMFUP3009B	Develop cutting plan and cut multiple layer upholstery fabric	Reformatted with ES added
LMFUP3010B	Cut, sew and fit skirts to upholstered furniture	Reformatted with ES added
LMFUP3011B	Cut, sew and fit or fill cushions	Reformatted with ES added
LMFUP3012B	Apply marine sewing and installation techniques	Reformatted with ES added
LMFUP3013B	Cut and sew canvas and acrylics	Reformatted with ES added
LMFUP3014B	Set up, operate and maintain CNC cutting machines	Reformatted with ES added
LMFFL1001A	Complete simple floor covering installation	Replaces LMFFC1001A
LMFFL2001A	Use flooring technology sector hand and power tools	Replaces LMFFC2001A
LMFFL2002A	Receive and prepare floor covering materials for installation	New unit
LMFFL2003A	Select, operate and maintain floor covering cutting machine	New unit
LMFFL2004A	Moisture test timber and concrete floors	New unit
LMFFL2101A	Remove existing floor coverings	Replaces LMFFC2002A
LMFFL2102A	Prepare, select and apply smoothing and patching compounds	Replaces LMFFC2005A
LMFFL2103A	Select and apply appropriate compounds and additives	Replaces LMFFC2005A

LMFFL2104A	Prepare concrete sub-floors using wet cleaning methods	Replaces LMFFC2005A
LMFFL2105A	Select, prepare and apply moisture barriers and damp proof membranes to concrete sub-floors	Replaces LMFFC2005A
LMFFL2106A	Prepare walls for covering	Replaces LMFFC2005A
LMFFL2107A	Select, operate and maintain grinding equipment	New unit
LMFFL2108A	Select, operate and maintain shot blasting equipment	New unit
LMFFL2109A	Select, operate and maintain demolition equipment	New unit
LMFFL2110A	Select, operate and maintain scarifying equipment	New unit
LMFFL2111A	Coarse sand timber flooring	Replaces LMFFC2004A
LMFFL2112A	Install hard underlays	Replaces LMFFC2003A
LMFFL2201A	Install carpet cushion/underlays and gripper accessories	Replaces LMFFC2006A
LMFFL2202A	Install unpatterned tufted and bonded carpet floor coverings	Replaces LMFFC2007A
LMFFL2203A	Install carpet tiles using standard installation procedures	Replaces LMFFC3002A
LMFFL2204A	Install unpatterned tufted and bonded carpet floor coverings to stairs	Replaces LMFFC3005A
LMFFL2301A	Install lay flat vinyl floor coverings	Replaces LMFFC2008A
LMFFL2302A	Install resilient tiles using standard installation procedures	Replaces LMFFC3011A
LMFFL2501A	Install laminate and engineered timber flooring	Replaces LMFFC2009A
LMFFL2502A	Install impact and sound absorption underlay	New unit
LMFFL2503A	Nail strip timber flooring	New unit
LMFFL2504A	Install expansion joints	New unit

LMFFL2505A	Install mouldings and edge trims to timber flooring	New unit
LMFFL3001A	Plan and cost flooring technology work	New unit. Replaces LMFFC3006A, LMFFC3017A and LMFFC3038A
LMFFL3002A	Establish and maintain a safe flooring technology work environment	New unit
LMFFL3101A	Inspect sub-floors	Replaces LMFFC3001A
LMFFL3102A	Prepare, select and apply screed to concrete sub-floors	Replaces LMFFC2005A
LMFFL3201A	Install carpet tiles using custom designs	Replaces LMFFC3002A
LMFFL3202A	Install adhesive fixed carpet floor coverings	Replaces LMFFC3003A
LMFFL3203A	Install commercial carpet floor coverings	Replaces LMFFC3004A
LMFFL3204A	Install patterned carpet floor coverings	Replaces LMFFC3004A
LMFFL3205A	Install custom design carpet and decorative finishes	Replaces LMFFC3004A
LMFFL3206A	Install synthetic textile floor coverings to sports facilities	New unit
LMFFL3207A	Install carpet floor coverings to custom design stairs	Replaces LMFFC3005A
LMFFL3301A	Install linoleum floor coverings	Replaces LMFFC3010A
LMFFL3302A	Install commercial vinyl floor coverings	Replaces LMFFC3010A
LMFFL3303A	Install resilient floor coverings using custom designs and decorative finishes	Replaces LMFFC3010A
LMFFL3304A	Install resilient tiles using custom design and decorative finishes	Replaces LMFFC3011A
LMFFL3305A	Install rubber floor coverings	Replaces LMFFC3012A
LMFFL3306A	Install resilient sheet to walls	Replaces LMFFC3013A
LMFFL3307A	Install resilient sheet to bench and countertops	Replaces LMFFC3013A

LMFFL3308A	Install anti-static resilient floor coverings	Replaces LMFFC3014A
LMFFL3309A	Install conductive resilient floor coverings	Replaces LMFFC3015A
LMFFL3310A	Cut and install resilient floor coverings to stairs	Replaces LMFFC3016A
LMFFL3401A	Mix and apply epoxy and seamless floor coverings	Replaces LMFFC3025A
LMFFL3402A	Apply solvent based coatings to timber floors	Replaces LMFFC3037A
LMFFL3403A	Apply water based coatings to timber floors	Replaces LMFFC3037A
LMFFL3404A	Apply oil based coatings to timber floors	Replaces LMFFC3037A
LMFFL3405A	Apply composite based coatings	Replaces LMFFC3025A
LMFFL3406A	Apply emulsion wax coatings	New unit
LMFFL3407A	Apply stains and fillers	New unit
LMFFL3501A	Adapt and apply custom designs to timber flooring	New unit
LMFFL3502A	Cut and install timber flooring to stairs	Replaces LMFFC3033A
LMFFL3503A	Install direct stick timber flooring	Replaces LMFFC3032A
LMFFL3504A	Detect defective timber flooring	Replaces LMFFC3001A
LMFFL3505A	Install block parquetry flooring	Replaces LMFFC3030A
LMFFL3506A	Install cork tiles	Replaces LMFFC3031A
LMFFL3507A	Install patterned parquetry	Replaces LMFFC3030A
LMFFL3508A	Install sheet mosaic parquetry	Replaces LMFFC3030A
LMFFL3509A	Install sprung timber flooring	Replaces LMFFC3034A
LMFFL3510A	Install strip timber flooring onto battens	New unit
LMFFL3511A	Install strip flooring onto plywood	New unit
LMFFL3512A	Repair timber flooring	Replaces LMFFC3035A
LMFFL3513A	Maintain timber, laminate and engineered flooring	New unit

LMFFL3601A	Fine sand timber flooring	Replaces	LMFFC3036A
LMFFL3602A	Edge sand timber flooring	New unit	
LMFFL3603A	Sand cork flooring	New unit	
LMFFL3604A	Sand and fill parquetry flooring	New unit	
LMFFL3605A	Apply finishes to cork flooring	New unit	
LMFCP2001A	Use coopering sector hand and power tools	New unit	
LMFCP2002A	Produce barrels using non-fired processes	New unit	
LMFCP3001A	Apply product and material knowledge to coopering operations	New unit	
LMFCP3002A	Select and season timber for coopering production	New unit	
LMFCP3003A	Produce barrels using fired processes	New unit	
LMFCP3004A	Maintain and repair barrels	New unit	
LMFMI3001A	Assemble instrument components	New unit	
LMFMI3002A	Construct and apply decorative treatments and finishes to musical instruments	New unit	
LMFMI3003A	Manufacture acoustic guitars	New unit	
LMFMI3004A	Manufacture brass instruments	New unit	
LMFMI3005A	Manufacture electric guitars	New unit	
LMFMI3006A	Manufacture percussion instruments	New unit	
LMFMI3007A	Manufacture special stringed instruments	New unit	
LMFMI3008A	Manufacture stringed instruments	New unit	
LMFMI3009A	Repair brass instruments	New unit	
LMFMI3010A	Repair percussion instruments	New unit	
LMFMI3011A	Repair woodwind instruments	New unit	
LMFMI4001A	Repair acoustic guitars	New unit	
LMFMI4002A	Repair electric guitars	New unit	

LMFMI4003A	Repair special stringed instruments	New unit
LMFMI4004A	Repair stringed instruments	New unit
LMFPT3001A	Develop knowledge of piano industry	New unit
LMFPT3002A	Select materials for piano repair and manufacture	New unit
LMFPT3003A	Repair upright and grand piano actions, keys and pedals	New unit
LMFPT3004A	Rebuild upright and grand piano actions, keys and pedals	New unit
LMFPT3005A	Re-string and re-pin a piano	New unit
LMFPT3006A	Regulate actions keys and pedals of upright pianos	New unit
LMFPT3007A	Regulate actions keys and pedals of grand pianos	New unit
LMFPT3008A	Understand piano tuning theory and basic acoustics	New unit
LMFPT3009A	Develop control of tuning hammers	New unit
LMFPT3010A	Pitch raise	New unit
LMFPT3011A	Tune unisons aurally to a beatless condition	New unit
LMFPT3012A	Tune octaves aurally to appropriate stretch	New unit
LMFPT3013A	Tune a temperament octave to produce an equally tempered scale	New unit
LMFPT3014A	Tune a piano aurally and-or electronically within time and accuracy constraints	New unit
LMFPT3015A	Voice a piano	New unit
LMFPT3016A	Provide advice to customers on piano tuning and repair	New unit
LMFSS2001A	Use security screens and grills hand and power tools	New unit
LMFSS2002A	Rectify faults in product	New unit

LMFSS2003A	Prepare product for Australian Standards testing	New unit
LMFSS2004A	Undertake surface preparation	New unit
LMFSS3001A	Install and replace security screens and grills	New unit
LMFSS3002A	Apply patterns and designs to security screens and grills	New unit
LMFSS3003A	Resolve quality and compliance issues	New unit
LMFSL2001A	Assemble lead light and stained glass components	New unit
LMFSL3001A	Apply product and material knowledge to lead light and stained glass operations	New unit
LMFSL3002A	Paint glass	New unit
LMFSL3003A	Fire glass	New unit
LMFSL3004A	Protect stained glass and lead lighting	New unit
LMFSL3005A	Fabricate and install residential lead light and stained glass windows and doors	New unit
LMFSL3006A	Prepare and install architectural engineered lead light and stained glass	New unit
LMFSL5001A	Assess conservation requirements	New unit
LMFSL5002A	Remove heritage lead light and stained glass	New unit
LMFSL5003A	Conserve heritage lead light and stained glass	New unit
LMFSL5004A	Install heritage lead light and stained glass	New unit
LMFSL5005A	Apply innovation in contemporary lead light and stained glass	New unit
LMFBA1001A	Construct a basic roll up blind	New unit
LMFBA2001A	Use blinds and awnings sector hand and power tools	New unit
LMFBA2002A	Set up, operate and maintain blinds and awnings sector static machines	New unit
LMFBA2004A	Select and apply blinds and awnings sector	New unit

	hardware & fixings	
LMFBA2005A	Construct roll up and pull down style blinds and awnings	New unit
LMFBA2006A	Construct vertical style blinds	New unit
LMFBA2007A	Construct textiles for canopy-style awnings	New unit
LMFBA2008A	Construct plastic and timber Venetian-style blinds	New unit
LMFBA2009A	Construct aluminium Venetian-style blinds	New unit
LMFBA2010A	Construct metal louvre and canopy hooded style awnings	New unit
LMFBA2011A	Construct aluminium roll up style awnings	New unit
LMFBA3001A	Install interior blinds	New unit
LMFBA3002A	Install exterior blinds and awnings	New unit
LMFBA3003A	Install timber shutters	New unit
LMFBA3004A	Construct folding arm style awnings	New unit
LMFBA3005A	Construct framework for canopy-style awnings	New unit
LMFBA3006A	Construct pleated style-blinds	New unit
LMFBA3007A	Construct wood weave style-blinds	New unit
LMFBA3008A	Construct pelmets	New unit
LMFBA3009A	Provide advice to customers on blinds and awnings	New unit
LMFBA4001A	Assess suitability of blinds or awnings	New unit

Explanation of the review date

The review date (shown on the title page and in the header of each page) indicates when the Training Package is expected to be reviewed in the light of changes such as changing technologies and circumstances. The review date is not an expiry date. Endorsed Training Packages and their components remain current until they are reviewed or replaced.

Overview

What is a Training Package?

A Training Package is an integrated set of nationally endorsed competency standards, assessment guidelines and Australian Qualifications Framework (AQF) qualifications for a specific industry, industry sector or enterprise.

Each Training Package:

- provides a consistent and reliable set of components for training, recognising and assessing people's skills, and may also have optional support materials
- enables nationally recognised qualifications to be awarded through direct assessment of workplace competencies
- encourages the development and delivery of flexible training which suits individual and industry requirements
- encourages learning and assessment in a work-related environment which leads to verifiable workplace outcomes.

How do Training Packages fit within the National Skills Framework?

The National Skills Framework applies nationally, is endorsed by the Ministerial Council for Vocational and Technical Education, and comprises the Australian Quality Training Framework 2010 (AQTF 2010), and Training Packages endorsed by the National Quality Council (NQC).

How are Training Packages developed?

Training Packages are developed by Industry Skills Councils or enterprises to meet the identified training needs of specific industries or industry sectors. To gain national endorsement of Training Packages, developers must provide evidence of extensive research, consultation and support within the industry area or enterprise.

How do Training Packages encourage flexibility?

Training Packages describe the skills and knowledge needed to perform effectively in the workplace without prescribing how people should be trained. Training Packages acknowledge that people can achieve vocational competency in many ways by emphasising what the learner can do, not how or where they learned to do it. For example, some experienced workers might be able to demonstrate competency against the units of competency, and even gain a qualification, without completing a formal training program.

With Training Packages, assessment and training may be conducted at the workplace, off-the-job, at a training organisation, during regular work, or through work experience, work placement, work simulation or any combination of these.

Who can deliver and assess using Training Packages?

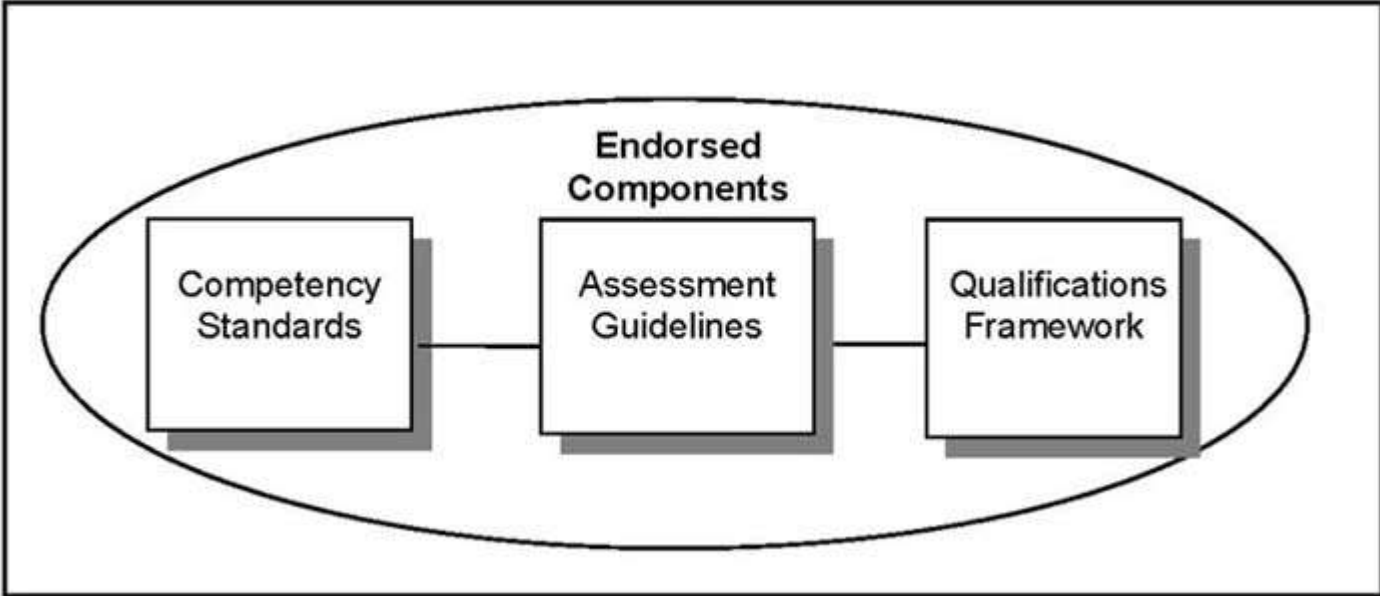
Training and assessment using Training Packages must be conducted by a Registered Training Organisation (RTO) that has the qualifications or specific units of competency on its scope of registration, or that works in partnership with another RTO, as specified in the AQTF 2010.

Training Package Components

Training Packages are made up of mandatory components endorsed by the NQC, and optional support materials.

Training Package Endorsed Components

The nationally endorsed components include the Competency Standards, Assessment Guidelines and Qualifications Framework. These form the basis of training and assessment in the Training Package and, as such, they must be used.



Competency Standards

Each unit of competency identifies a discrete workplace requirement and includes the knowledge and skills that underpin competency as well as language, literacy and numeracy; and occupational health and safety requirements. The units of competency must be adhered to in training and assessment to ensure consistency of outcomes.

Assessment Guidelines

The Assessment Guidelines provide an industry framework to ensure all assessments meet industry needs and nationally agreed standards as expressed in the Training Package and the AQTF 2010. The Assessment Guidelines must be followed to ensure the integrity of assessment leading to nationally recognised qualifications.

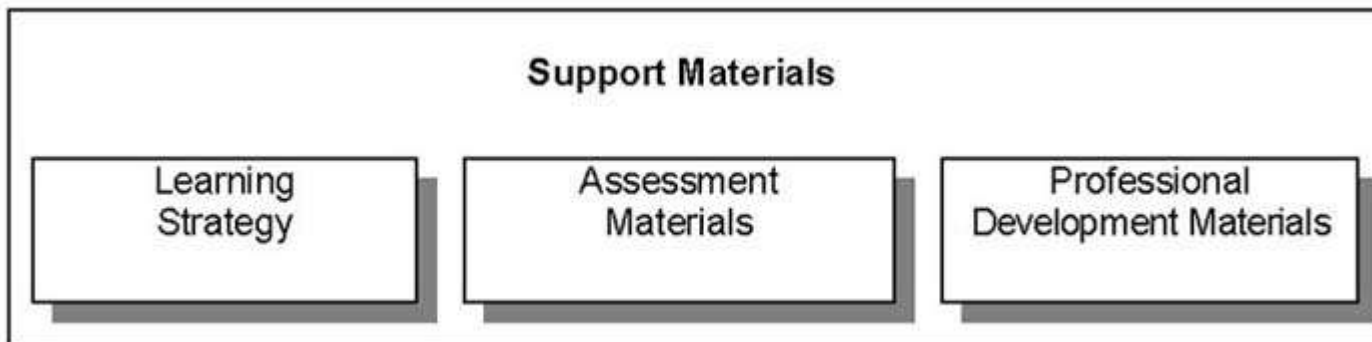
Qualifications Framework

Each Training Package provides details of those units of competency that must be achieved to award AQF qualifications. The rules around which units of competency can be combined to make up a valid AQF qualification in the Training Package are referred to as the "packaging rules". The packaging rules must be followed to ensure the integrity of nationally recognised qualifications issued.

Training Package Support Materials

The endorsed components of Training Packages are complemented and supported by optional support materials that provide for choice in the design of training and assessment to meet the needs of industry and learners.

Training Package support materials can relate to single or multiple units of competency, an industry sector, a qualification or the whole Training Package. They tend to fall into one or more of the categories illustrated below.



Training Package support materials are produced "by a range of stakeholders such as RTOs, individual trainers and assessors, private and commercial developers and Government agencies.

Where such materials have been quality assured through a process of "noting" by the NQC, they display the following official logo. Noted support materials are listed on the National Training Information Service (NTIS), together with a detailed description and information on the type of product and its availability < www.ntis.gov.au >.



It is not compulsory to submit support materials for noting; any resources that meet the requirements of the Training Package can be used.

Training Package, Qualification and Unit of Competency Codes

There are agreed conventions for the national codes used for Training Packages and their components. Always use the correct codes, exactly as they appear in the Training Package, **and with the code always before the title.**

Training Package Codes

Each Training Package has a unique five-character national code assigned when the Training Package is endorsed, for example LMF02. The first three characters are letters identifying the Training Package industry coverage and the last two characters are numbers identifying the year of endorsement.

Qualification Codes

Within each Training Package, each qualification has a unique eight-character code, for example LMF10108. Qualification codes are developed as follows:

- the first three letters identify the Training Package;
- the first number identifies the qualification level (noting that, in the qualification titles themselves, arabic numbers are **not** used);
- the next two numbers identify the position in the sequence of the qualification at that level; and
- the last two numbers identify the year in which the qualification was endorsed. (Where qualifications are added after the initial Training Package endorsement, the last two numbers may differ from other Training Package qualifications as they identify the year in which those particular qualifications were endorsed.)

Unit of Competency Codes

Within each Training Package, each unit of competency has a unique code. Unit of competency codes are assigned when the Training Package is endorsed, or when new units of competency are added to an existing endorsed Training Package. Unit codes are developed as follows:

- a typical code is made up of 12 characters, normally a mixture of uppercase letters and numbers, as in LMFAH4001A;
- the first three characters signify the Training Package - LMF02 - in the above example and up to eight characters, relating to an industry sector, function or skill area, follow;
- the last character is always a letter and identifies the unit of competency version. An "A" at the end of the code indicates that this is the original unit of competency. "B", or another incremented version identifier means that minor changes have been made. Typically this would mean that wording has changed in the range statement or evidence guide, providing clearer intent; and
- where changes are made that alter the outcome, a new code is assigned and the title is changed.

Training Package, Qualification and Unit of Competency Titles

There are agreed conventions for titling Training Packages and their components. Always use the correct titles, exactly as they appear in the Training Package, and with the code always placed before the title.

Training Package Titles

The title of each endorsed Training Package is unique and relates the Training Packages broad industry coverage.

Qualification Titles

The title of each endorsed Training Package qualification is unique. Qualification titles use the following sequence:

- first, the qualification is identified as either Certificate I, Certificate II, Certificate III, Certificate IV, Diploma, Advanced Diploma, Vocational Graduate Certificate, or Vocational Graduate Diploma;
- this is followed by the words "in" for Certificates I to IV, and "of" for Diploma, Advanced Diploma, Vocational Graduate Certificate and Vocational Graduate Diploma;
- then, the industry descriptor, for example Telecommunications; and
- then, if applicable, the occupational or functional stream in brackets, for example (Computer Systems).

For example:

- LMF10108 Certificate I in Furnishing

Unit of Competency Titles

Each unit of competency title is unique. Unit of competency titles describe the competency outcome concisely, and are written in sentence case.

For example:

- LMFAH4001A Recommend security technology, hardware and services

LMF02 development history

LMF02 Version 1

Endorsed in 2002.

LMF02 Version 2

The key changes from LMF02 Version 1 to LMF02 Version 2 are:

- Inclusion of units of competency and qualifications in seven new sectors
- Review of packaging frameworks for Soft Furnishing
- Replacement of Floor Covering and Finishing qualifications with Flooring Technology qualifications
- Inclusion of employability skills and qualification statements
- Reformatting of all units, including addition of mandatory statements, to comply with new DEST requirements
- Reformatting of all qualification frameworks to comply with new DEST requirements.

Rationale for changes to the LMF02 Training Package

Incorporation of Coopering units and qualifications in LMF02 Version 2

A Cooper is a maker and repair of wooden barrels or casks. The trade is authoritatively traced to the production of barrels in Babylon in about 900 B.C. The Coopers Company Guild received its Charter in London in 1501, but records of Coopers Guilds are in existence some 200 years earlier.

The Stage III development requirements for the outstanding Furnishing Training Package components were covered in detail in the February 2003 report titled Stage 3 Furnishing Training Package Feasibility Exercise.

This report recommended the development of a Coopering sector within a new version of the Furnishing Training Package. This is of particular relevance as recently emerging export requirements need to be matched with appropriate specialist skills.

The new Coopering units and qualifications were developed for LMF02 Version 2 to target this skill area.

Incorporation of Flooring Technology units and qualifications in LMF02 Version 2

The review of the Floor Covering (LMF02) training package resulted from concerns expressed by industry practitioners, manufacturers and some providers that the package did not fully reflect the needs of industry in terms of technological advances, realistic workplace applications, flexibility and emerging specialisations.

The review requirement also coincided with a number of other initiatives in the Flooring Industry including:

- The formal launch of the Flooring Industry Initiative in Victoria in June 2005
- The formation and meeting of the most comprehensive national industry flooring group in recent history during July 2005
- The formal recognition of the Flooring Industry as a skills shortage discipline by the Federal Government on 28 March 2006
- The formal launch of the Flooring Industry Initiative in NSW in June 2006.

The LMF02 Floor Covering units and qualifications were upgraded and replaced in LMF02 Version 2 to form the new Flooring Technology units and qualifications.

Expansion of units and qualifications for Furniture Makers

The Stage III development requirements for the outstanding Furnishing Training Package components were covered in detail in the February 2003 report titled Stage 3 Furnishing Training Package Feasibility Exercise.

During the initial stages of development it became clear that the object of this exercise was much broader than the fine woods concept. Fine furniture involves woods and, increasingly, a range of non-timber materials. It was agreed by the expert national Technical Advisory Group that the focus should actually be an advanced furniture maker. This discipline combines the strengths of a highly skilled technical craftsman/artisan with a strong practical applied design component and requisite business skills.

Units and qualifications were developed for LMF02 Version 2 to cover skills at the Certificate IV and Diploma levels for furniture makers.

- *Incorporation of Musical Instrument Making and Repair units and qualifications in LMF02 Version 2*

Musical instrument making is an ancient traditional skill with evidence of this going back many thousand years. In Australia, the bulk of instrument makers and repairers are hobbyists who produce a range of instruments and repair a limited range of instruments within close societies.

There are a relatively small number of professional musical instrument makers and repairers, some of whom have overseas qualifications, who market their products

within Australia and Internationally.

The majority of instrument makers in Australia specialise in those instruments which are wood based such as violins, violas, cellos and guitars. There are also a small number who build percussion instruments.

The Stage III development requirements for the outstanding Furnishing Training Package components were covered in detail in the February 2003 report titled Stage 3 Furnishing Training Package Feasibility Exercise.

This report recommended the development of a Musical Instrument Making and Repair Sector within the Furnishing Training Package.

Units and qualifications were developed for LMF02 Version 2 to cover skills at the Certificate III and Certificate IV levels for musical instrument makers and repairers.

Incorporation of Piano Technician units and qualification in LMF02 Version 2

A piano technician is a tuner and repairer of upright, grand and player pianos. The trade is authoritatively traced to the invention of the pianoforte in Italy in the early 1700s, which is where its name derives. The pianoforte was a far more complicated instrument than the harpsichord and required greater skill in tuning the instrument. Over the next 100 years the modern piano was developed, and this saw an even greater focus on the tuner. The first recorded apprentice was in 1787, with a five year term and continued employment guaranteed. However, workers who just tuned and repaired pianofortes were recorded as working throughout the 1700s.

The Stage III development requirements for the outstanding Furnishing Training Package components were covered in detail in the February 2003 report titled Stage 3 Furnishing Training Package Feasibility Exercise.

Units and qualification were developed for LMF02 Version 2 to cover skills at the Certificate III level for piano technicians.

Incorporation of Security Grills and Screens units and qualifications in LMF02 Version 2

Security Grills and Screens is a significant sector with a potential for an extensive training requirement. It is a sector which is currently in a state of steady growth as domestic and commercial establishments attempt to enhance their security. Increases in insurance premiums and the perception of increasing risk of theft or other crime are the catalysts for this growth. However, the current boom in the building industry also flows on into this sector. Concern was expressed that the lack of regulation and standards and the lack of accredited training allowed 'backyard' operators to participate in the industry with less than glowing results. That public safety is at risk is a significant concern – in addition to keeping offenders out, there is a concern that safe egress from secured premises is possible. It is likely that demand for its product will cause the sector to continue to grow.

Units and qualifications were developed for LMF02 Version 2 to cover skills at the Certificate II and Certificate III levels for the Security Grills and Screens sector.

Incorporation of Stained Glass and Lead Lighting units and qualifications in LMF02 Version 2

Stained Glass and Lead Lighting covers entry, basic requirements and limited tasks at Certificate II. Certificate III covers the notional trade level requiring the production and installation of stained glass and/or lead lighting. There is no legitimate requirement for a Certificate IV as those who operate at this level are narrowly skilled specialists.

The Stage III development requirements for the outstanding Furnishing Training Package components were covered in detail in the February 2003 report titled Stage 3 Furnishing Training Package Feasibility Exercise. The report recommended the development of a Stained Glass and Lead Lighting Sector within the Furnishing Training Package. Units and qualifications were developed for LMF02 Version 2 at the Certificate II and Certificate III levels to cover Stained Glass and Lead Lighting skill outcomes.

Incorporation of Blinds and Awnings units and qualifications in LMF02 Version 2

The Stage III development requirements for the outstanding Furnishing Training Package components were covered in detail in the February 2003 report titled Stage 3 Furnishing Training Package Feasibility Exercise.

This report recommended the development of a Blinds and Awnings Sector within the Furnishing Training Package. Units and qualifications were developed for LMF02 Version 2 at the Certificate II and Certificate III levels to cover skill outcomes in the blinds and awnings sector.

LMF02 Version 3

The key changes from LMF02 Version 2 to LMF Version 3 are:

- The inclusion of units of competency and qualifications in two new sectors:
 - Interior decoration and design
 - Furniture design and technology

The revision of the Certificate I in Furnishing to include interior decoration and design pathways.

In 2003, the then Light Manufacturing ITAB received a report titled *Stage 3 Furnishing Training Package Feasibility Exercise and Interior Decoration Feasibility Project*. This report recommended the development of a Furniture Design sector to meet emerging industry needs and to replace a number of existing accredited State courses.

It was determined that the existing LMF02 Diploma of Furnishing Technology and Advanced Diploma of Furnishing Management met the training needs for technical and management skills for the non-furniture sectors but that new higher level qualifications were required to meet the needs of furniture design and interior decoration and design sectors.

The new units and qualifications have full support of the industry. This development has resulted from industry identified needs and in response to the following evolving trends identified in the MSA Environmental Scan:

- increased requirements for RTOs to comply with Training Packages
- increased recognition of non-formal skills pathways

- attempts to lift overall educational achievement levels.

Development has drawn on the experience and expertise of industry and RTOs to make the changes required by industry and to ensure LMF continues to meet their training and assessment requirements well into the future.

LMF02 Version 4

The kitchens and bathrooms sector is growing in Australia and according to industry representatives now employs more trade qualified cabinet makers than any other sector in the furnishing related industries (industry representatives estimate up to 80%). This reflects a significant shift in the application of furniture making skills from the more traditional skill base in the production of free standing furniture to work with 'fitted' furniture such as that used in kitchens and bathrooms.

MSA identified an industry need for an updating of the Training Package components within the Furnishing Training Package LMF02 in order to more appropriately meet these current skill needs.

Specifically, the industry needs identified and addressed in this project include:

- Review of the currently endorsed Certificate II in Furniture Making and Certificate III in Furniture Making (Cabinet Making) in order to integrate the needs of the kitchen and bathroom sector and remove mandatory requirements that are not necessary to this sector.
- Development of new units of competency to cover current skill gaps in the area of fitted cabinet manufacture and onsite installation in kitchens, bathrooms and other ancillary areas.
- Development of a new qualification and units of competency to cover skills used to support clients in the selection and ordering of kitchens and bathrooms from a showroom environment.

In addition, MSA and industry identified a need for coverage of skills in the design of kitchens and bathrooms. Extensive research and consultation was conducted and drafts of a new qualification and related units of competency were developed. While there was significant support for a new Certificate IV targeting kitchen and bathroom design, a consensus position from industry representatives on the qualification packaging and titling was not achieved by the time the project concluded. However agreement on content at the unit of competency level was achieved. MSA has decided to include further consultation and development work on the proposed Certificate IV qualification in the Furnishing Training Package Redevelopment Project which has recently commenced.

The new components in Version 4 have been developed and validated extensively with industry and RTO representatives. This includes representation from cabinet makers, kitchen and bathroom manufacturers, installers and designers, unions, licensing bodies, RTOs, and industry associations from around Australia.

The project outcomes are qualifications and units of competency that reflect the skill requirements of the kitchens and bathrooms industry and incorporate the latest information on industry practice, gathered directly from enterprises and industry associations.

LMF02 Version 5

The development of new components for the kitchen and bathroom sector was identified as an industry Training Package requirement within MSA's Continuous Improvement Plan for 2008-2009.

The Kitchens and Bathrooms Project commenced in March 2008 and aimed to identify and target the skill needs of this industry sector through an extension of coverage of the Furnishing Training Package LMF02. It was initiated in response to both industry requests and MSA response to the growth of this sector in Australia. MSA appointed Richard Jenkins & Associates as the consultant for the project.

The project resulted in the following qualifications being submitted for endorsement in version 4 of the Furnishing Training Package.

- LMF20309 Certificate II in Furniture Making
- LMF30409 Certificate III in Cabinet Making
- LMF32009 Certificate III in Kitchens and Bathrooms (Client Services)

The Kitchens and Bathrooms project in 2008 also examined the needs of people working as designers of kitchens, bathrooms and other interior spaces. While draft units were developed, agreement on a qualification was not able to be achieved during the MSA Kitchens and Bathrooms project and the finalisation of a design qualification was deferred to the Furnishing Training Package Redevelopment Project which is currently underway.

The kitchens and bathrooms sector is growing in Australia. One indicator according to industry representatives is that the sector now employs more trade qualified cabinet makers than any other sector in the furnishing related industries (industry representatives estimate up to 80%). Another form of growth is that people competent in kitchen and bathroom design, installation and renovation are being recognised by the public as also capable of undertaking similar work in other interior spaces where cabinetry design, installation and renovation is involved. This breadth of capability has been recognised through additional coverage at the unit level and through the title of the qualification now proposed for endorsement.

MSA and industry identified a need for coverage of skills in the design of kitchens and bathrooms and interior spaces as part of the previous Kitchens and Bathrooms project. There has been strong support for a design qualification that recognises the designer's ability to meet customer needs through the ability to combine design skills with detailed knowledge of externally manufactured kitchen and bathroom products and components and the on-site installation and renovation process.

The new Certificate IV in Design of Kitchens, Bathrooms and Interior Spaces now offers national recognition and opportunities for formal training in one of the growth areas of the Furnishing Training Package coverage.

LMF02 Version 6

Two new units of competency for architectural hardware specifying have been developed for inclusion as electives in LMF40202 Certificate IV in Furnishing Technology and for use in Skill Sets related to architectural hardware specifying.

The two new units are:

- LMFAH4001A Recommend security technology, hardware and services
- LMFAH4002A Prepare architectural door hardware schedules

The units have been developed by MSA in response to an increased demand for architectural hardware specifiers in more recent years especially around the need to meet state and federal regulatory requirements

These units are related to the niche area of architectural hardware. This is an important specialist occupational area which involves technical knowledge of door and window locking systems, automatic door closers, hinge arrangements and emergency exiting devices that would be required to meet national standards and building codes. The technical knowledge also encompasses the interpretation of complex building designs and drawings that architects and builders submit as part of quotations.

Architectural hardware specifiers use their technical knowledge to provide advice to clients on product selection and to prepare schedules on architectural hardware products needed for construction projects.

The national Architectural Door Hardware Association which represents over fifty member companies informed MSA that members are having difficulties in recruiting suitably qualified technicians (often known as specifiers). This difficulty is compounded by the difficulty of finding suitable accredited training to support new entrants to architectural hardware. The two new units will address skill areas which this project has identified as not able to be addressed by existing units. These include the development of architectural hardware product knowledge, understanding of relevant industry codes of practice and standards, and the preparation of client briefs.

Overview of the Furnishing Training Package

The furnishing industry has a long and proud history of being an excellent employer and trainer of new entrants to its industry. The industry is highly divergent, containing long-standing occupations such as Cabinet Making, Wood Machining, Polishing, Upholstery and Mattress and Base Making.

In the past 20 years other furnishing occupations have been recognised with structured training, including Floor Finishing and Covering, Glazing, Picture Framing, Soft Furnishing and Interior Decorating. While these occupations represent more significant numbers of people in the industry, furnishing also caters for a number of equally important, yet small sectors and/or emerging industries, such as Piano Tuning and Repair, Musical Instrument Making and Repair, Blinds and Awning, Coopering, Security Screens and Grills, Stained Glass and Lead Lighting.

The furnishing industry is grouped into sub-sectors which define related production techniques or products and various allied manufacturing activities and services. These are described in the Training Package as:

- Flooring Technology
- Furniture Finishing
- Furniture Making
- Glass and Glazing
- Mattress and Base Making
- Picture Framing
- Soft Furnishing
- Upholstery
- Blinds and Awnings
- Coopering
- Stained Glass and Lead Lighting
- Musical Instrument Making and Repair
- Piano Technology
- Security Screens and Grills
- Furnishing Management
- Interior Decoration and Design
- Furniture Design and Technology.

The size of the furnishing industry is most surprising as it is commonly regarded as a small industry. While the enterprises that form the industry are predominantly small businesses (95 per cent of enterprises employing between one and 20 people), the number of enterprises and employees clearly demonstrate that it should be more accurately viewed as a medium-sized industry.

The industry represents 3.2 per cent of gross domestic product equating to approximately \$49 billion turnover and employs 3.1 per cent of the Australian workforce. The workforce of well in excess of 100,000 (full-time equivalents) is employed in small business enterprises across Australia. This picture of the industry is rarely portrayed due to statistical collections by the Australian Bureau of Statistics

attributing much of the furnishing industry turnover and employment, particularly in the growing manufactured board sector, to general manufacturing and related services.

An Industry Undergoing Change

The Australian furnishing industry, or at least major parts of it are at the crucial point along the evolutionary path. Technology advances in materials and a more discerning and demanding client group are impacting on the market place. There is an increased demand for unique and locally designed products.

At the other end of the spectrum there are increasing quantities of mass-produced third-world imports being marketed by prominent suppliers. This trend can only be arrested if the Australian industry can find ways to produce stock lines which can compete in terms of quality and cost.

The need for an appropriately skilled and responsive workforce has never been so evident as it is now.

Directions for Furnishing Training

The Furnishing Training Package is designed to assist enterprises and Registered Training Organisations in developing the skills required to support sustained industry success within national and global markets.

This will require a fundamental shift in thinking by all industry partners. In particular, partners must work together to ensure that vocational education and training enables employees (actual and prospective) to both:

- gain the competencies which are required to meet current and emerging industry and enterprise requirements, and
- gain qualifications which are nationally recognised, respected and transferable.

This is unashamedly an 'industry driven' approach, with the Units of Competency, qualifications and assessment guidelines reflecting the requirements of the industry sectors, enterprises and their employees. In keeping with the national policy of increasing the openness of the training market, the Furnishing Training Package aims to support more direct involvement by enterprises in the training and assessment of their workforces, and enable Registered Training Organisations to develop and deliver the services which individuals and enterprises value.

- The endorsed components of the Training Package provide the foundation on which this purchaser/provider partnership approach will be built.

The Furnishing Training Package is subject to continuous improvement with new occupational areas and industry sectors being included as industry identifies the needs. It is suggested that users confirm the status of the units and qualifications prior to use.

Confirmation can be obtained from:

Manufacturing Skills Australia

PO Box 289

North Sydney 2059

Phone: 02 9955 5500

Email: info@mskills.com.au

Qualifications Framework

The Australian Qualifications Framework

What is the Australian Qualifications Framework?

A brief overview of the Australian Qualifications Framework (AQF) follows. For a full explanation of the AQF, see the *AQF Implementation Handbook*.

http://www.aqf.edu.au/Portals/0/Documents/Handbook/AQF_Handbook_07.pdf

The AQF provides a comprehensive, nationally consistent framework for all qualifications in post-compulsory education and training in Australia. In the vocational education and training (VET) sector it assists national consistency for all trainees, learners, employers and providers by enabling national recognition of qualifications and Statements of Attainment.

Training Package qualifications in the VET sector must comply with the titles and guidelines of the AQF. Endorsed Training Packages provide a unique title for each AQF qualification which must always be reproduced accurately.

Qualifications

Training Packages can incorporate the following eight AQF qualifications.

- Certificate I in ...
- Certificate II in ...
- Certificate III in ...
- Certificate IV in ...
- Diploma of ...
- Advanced Diploma of ...
- Vocational Graduate Certificate of ...
- Vocational Graduate Diploma of ...

On completion of the requirements defined in the Training Package, a Registered Training Organisation (RTO) may issue a nationally recognised AQF qualification. Issuance of AQF qualifications must comply with the advice provided in the *AQF Implementation Handbook* and the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

Statement of Attainment

A Statement of Attainment is issued by a Registered Training Organisation when an individual has completed one or more units of competency from nationally recognised qualification(s)/courses(s). Issuance of Statements of Attainment must comply with the advice provided in the current *AQF Implementation Handbook* and the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

Under the AQTF 2010, RTOs must recognise the achievement of competencies as recorded on a qualification or Statement of Attainment issued by other RTOs. Given this, recognised competencies can progressively build towards a full AQF qualification.

AQF Guidelines and Learning Outcomes

The *AQF Implementation Handbook* provides a comprehensive guideline for each AQF qualification. A summary of the learning outcome characteristics and their distinguishing features for each VET related AQF qualification is provided below.

Certificate I

Characteristics of Learning Outcomes

Breadth, depth and complexity of knowledge and skills would prepare a person to perform a defined range of activities most of which may be routine and predictable.

Applications may include a variety of employment related skills including preparatory access and participation skills, broad-based induction skills and/or specific workplace skills. They may also include participation in a team or work group.

Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

- demonstrate knowledge by recall in a narrow range of areas;
- demonstrate basic practical skills, such as the use of relevant tools;
- perform a sequence of routine tasks given clear direction
- receive and pass on messages/information.

Certificate II

Characteristics of Learning Outcomes

Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of operations to be applied.

Performance of a prescribed range of functions involving known routines and procedures and some accountability for the quality of outcomes.

Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others as part of a group or team.

Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

- demonstrate basic operational knowledge in a moderate range of areas;
- apply a defined range of skills;
- apply known solutions to a limited range of predictable problems;
- perform a range of tasks where choice between a limited range of options is required;
- assess and record information from varied sources;
- take limited responsibility for own outputs in work and learning.

Certificate III

Characteristics of Learning Outcomes

Breadth, depth and complexity of knowledge and competencies would cover selecting, adapting and transferring skills and knowledge to new environments and providing technical advice and some leadership in resolution of specified problems. This would be applied across a range of roles in a variety of contexts with some complexity in the extent and choice of options available.

Performance of a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Applications may involve some responsibility for others. Participation in teams including group or team co-ordination may be involved.

Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

- demonstrate some relevant theoretical knowledge
- apply a range of well-developed skills
- apply known solutions to a variety of predictable problems
- perform processes that require a range of well-developed skills where some discretion and judgement is required
- interpret available information, using discretion and judgement
- take responsibility for own outputs in work and learning
- take limited responsibility for the output of others.

Certificate IV*Characteristics of Learning Outcomes*

Breadth, depth and complexity of knowledge and competencies would cover a broad range of varied activities or application in a wider variety of contexts most of which are complex and non-routine. Leadership and guidance are involved when organising activities of self and others as well as contributing to technical solutions of a non-routine or contingency nature. Performance of a broad range of skilled applications including the requirement to evaluate and analyse current practices, develop new criteria and procedures for performing current practices and provision of some leadership and guidance to others in the application and planning of the skills. Applications involve responsibility for, and limited organisation of, others.

Distinguishing Features of Learning Outcomes

Do the competencies enable an individual with this qualification to:

- demonstrate understanding of a broad knowledge base incorporating some theoretical concepts
- apply solutions to a defined range of unpredictable problems
- identify and apply skill and knowledge areas to a wide variety of contexts, with depth in some areas
- identify, analyse and evaluate information from a variety of sources
- take responsibility for own outputs in relation to specified quality standards
- take limited responsibility for the quantity and quality of the output of others.

Diploma*Characteristics of Learning Outcomes*

Breadth, depth and complexity covering planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, evaluation and co-ordination.

The self directed application of knowledge and skills, with substantial depth in some areas where judgment is required in planning and selecting appropriate equipment, services and techniques for self and others.

Applications involve participation in development of strategic initiatives as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation functions. Group or team co-ordination may be involved.

The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

Distinguishing Features of Learning Outcomes

Do the competencies or learning outcomes enable an individual with this qualification to:

- demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas
- analyse and plan approaches to technical problems or management requirements
- transfer and apply theoretical concepts and/or technical or creative skills to a range of situations
- evaluate information, using it to forecast for planning or research purposes
- take responsibility for own outputs in relation to broad quantity and quality parameters
- take some responsibility for the achievement of group outcomes.

Advanced Diploma

Characteristics of Learning Outcomes

Breadth, depth and complexity involving analysis, design, planning, execution and evaluation across a range of technical and/or management functions including development of new criteria or applications or knowledge or procedures.

The application of a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specific functions. Contribution to the development of a broad plan, budget or strategy is involved and accountability and responsibility for self and others in achieving the outcomes is involved.

Applications involve significant judgement in planning, design, technical or leadership/guidance functions related to products, services, operations or procedures.

The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

Distinguishing Features of Learning Outcomes

Do the competencies or learning outcomes enable an individual with this qualification to:

- demonstrate understanding of specialised knowledge with depth in some areas
- analyse, diagnose, design and execute judgements across a broad range of technical or management functions
- generate ideas through the analysis of information and concepts at an abstract level
- demonstrate a command of wide-ranging, highly specialised technical, creative or conceptual skills
- demonstrate accountability for personal outputs within broad parameters
- demonstrate accountability for personal and group outcomes within broad parameters.

Vocational Graduate Certificate

Characteristics of competencies or learning outcomes

- The self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.
- Substantial breadth and complexity involving the initiation, analysis, design, planning, execution and evaluation of technical and management functions in highly varied and highly specialised contexts.
- Applications involve making significant, high-level, independent judgements in major broad or planning, design, operational, technical and management functions in highly varied and specialised contexts. They may include responsibility and broad-ranging accountability for the structure, management and output of the work or functions of others.
- The degree of emphasis on breadth, as opposed to depth, of knowledge and skills may vary between qualifications granted at this level.

Distinguishing features of learning outcomes

- Demonstrate the self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.
- Initiate, analyse, design, plan, execute and evaluate major broad or technical and management functions in highly varied and highly specialised contexts.
- Generate and evaluate ideas through the analysis of information and concepts at an abstract level.
- Demonstrate a command of wide-ranging, highly specialised technical, creative or conceptual skills in complex contexts.
- Demonstrate responsibility and broad-ranging accountability for the structure, management and output of the work or functions of others.

Vocational Graduate Diploma

Characteristics of competencies or learning outcomes

- The self-directed development and achievement of broad and specialised areas of knowledge and skills, building on prior knowledge and skills.
- Substantial breadth, depth and complexity involving the initiation, analysis, design, planning, execution and evaluation of major functions, both broad and highly specialised, in highly varied and highly specialised contexts.
- Further specialisation within a systematic and coherent body of knowledge.
- Applications involve making high-level, fully independent, complex judgements in broad planning, design, operational, technical and management functions in highly varied and highly specialised contexts. They may include full responsibility and accountability for all aspects of work and functions of others, including planning, budgeting and strategy development.
- The degree of emphasis on breadth, as opposed to depth, of knowledge and skills may vary between qualifications granted at this level.

Distinguishing features of learning outcomes

- Demonstrate the self-directed development and achievement of broad and highly specialised areas of knowledge and skills, building on prior knowledge and skills.
- Initiate, analyse, design, plan, execute and evaluate major functions, both broad and

within highly varied and highly specialised contexts.

- Generate and evaluate complex ideas through the analysis of information and concepts at an abstract level.
- Demonstrate an expert command of wide-ranging, highly specialised, technical, creative or conceptual skills in complex and highly specialised or varied contexts.
- Demonstrate full responsibility and accountability for personal outputs.
- Demonstrate full responsibility and accountability for all aspects of the work or functions of others, including planning, budgeting and strategy.

Qualifications and Packaging Rules

[Note: Insert relevant information in relation to the above heading here]

Qualification Pathways

The following pathways charts are provided to show the types of pathways into and from qualifications that are possible with this Training Package. For more information about qualifications and pathways contact ((CONTACT DETAILS OF THE INDUSTRY SKILLS COUNCIL))

((INDUSTRY SPECIFIC CHART OR CHARTS))

Skill Sets

Definition

Skill sets are defined as single units of competency, or combinations of units of competency from an endorsed Training Package, which link to a licence or regulatory requirement, or defined industry need.

Wording on Statements of Attainment

Skill sets are a way of publicly identifying logical groupings of units of competency which meet an identified need or industry outcome. Skill sets are not qualifications.

Where skill sets are identified in a Training Package, the Statement of Attainment can set out the competencies a person has achieved in a way that is consistent and clear for employers and others. This is done by including the wording ‘these competencies meet *[insert skill set title or identified industry area]* need’ on the Statement of Attainment. This wording applies only to skill sets that are formally identified as such in the endorsed Training Package. See the 2010 edition of the AQF Implementation Handbook for advice on wording on Statements of Attainment. http://www.aqf.edu.au/Portals/0/Documents/Handbook/AQF_Handbook_07.pdf

Skill Sets in this Training Package

This section provides information on Skill Sets within this Training Package, with the following important disclaimer: Readers should ensure that they have also read the part of the Training Package that outlines licensing and regulatory requirements.

Where this section is blank, nationally recognised Skill Sets have yet to be identified in this industry.

[Note to developers: Provide advice about SkillSets including:

advice about other requirements of regulations that may need to be met such as any requirements for Australian citizenship or evidence of a certain period of work experience
 advice about logical clusters that may meet industry needs; this could be similar to advice in the qualification packaging rules about choice of electives for particular pathways, but should be specific to the Skill Set

advice about the circumstances under which Skill Sets, rather than a particular qualification, could be delivered – where this is appropriate]

[Insert Skill Sets]

Skill Set: [Insert title]

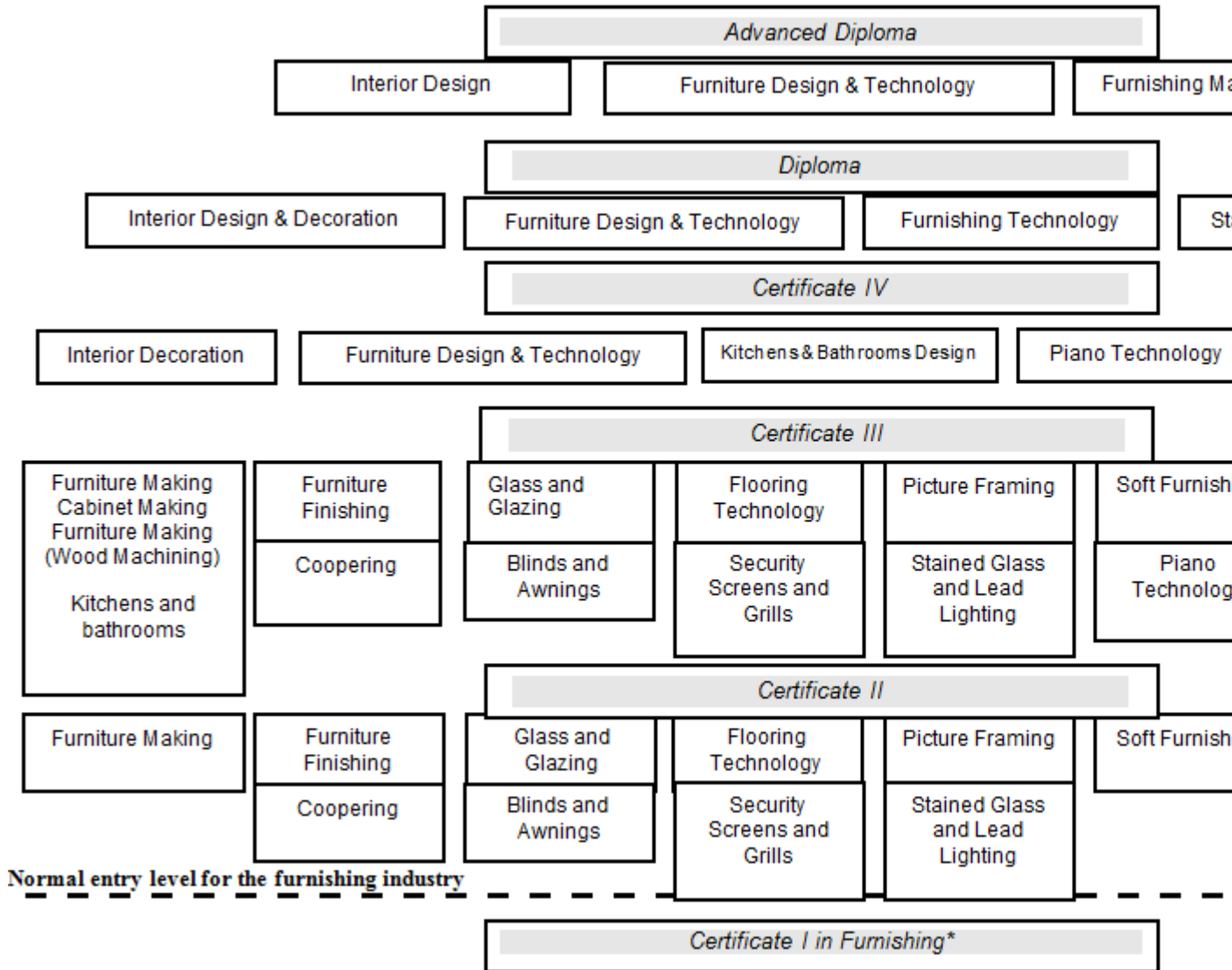
Target Group		
Units		

Pathway	
Suggested words for Statement of Attainment	

Qualification Pathways

The following pathways charts are provided to show the types of pathways into and from qualifications that are possible with this Training Package. For more information about qualifications and pathways contact Manufacturing Industry Skills Council (<http://www.mskills.com.au>).

FURNISHING INDUSTRY: QUALIFICATIONS PROGRESSION DIAGRAM



* Has a VET in Schools focus. With options to attain Core plus Sector Specialist Units as credits towards a Certificate II.

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http://www.aqf.edu.au/Portals/0/Documents/Handbook/AQF_Handbook_07.pdf

Skill Sets in this Training Package

There are no Skills Sets developed for LMF02 at this time

Employability Skills

Employability Skills replacing Key Competency information from 2006

In May 2005, the approach to incorporate Employability Skills within Training Package qualifications and units of competency was endorsed. As a result, from 2006 Employability Skills will progressively replace Key Competency information in Training Packages.

Background to Employability Skills

Employability Skills are also sometimes referred to as generic skills, capabilities or Key Competencies. The Employability Skills discussed here build on the Mayer Committee's Key Competencies, which were developed in 1992 and attempted to describe generic competencies for effective participation in work.

The Business Council of Australia (BCA) and the Australian Chamber of Commerce and Industry (ACCI), produced the *Employability Skills for the Future* report in 2002 in consultation with other peak employer bodies and with funding provided by the Department of Education, Science and Training (DEST) and the Australian National Training Authority (ANTA). Officially released by Dr Nelson (Minister for Education, Science and Training) on 23 May 2002, copies of the report are available from the DEST website at:

http://www.dest.gov.au/archive/ty/publications/employability_skills/index.htm.

The report indicated that business and industry now require a broader range of skills than the Mayer Key Competencies Framework and featured an Employability Skills Framework identifying eight Employability Skills*:

- communication
- teamwork
- problem solving
- initiative and enterprise
- planning and organising

- self-management
- learning
- technology.

The report demonstrated how Employability Skills can be further described for particular occupational and industry contexts by sets of facets. The facets listed in the report are the aspects of the Employability Skills that the sample of employers surveyed identified as being important work skills. These facets were seen by employers as being dependent both in their nature and priority on an enterprise's business activity.

*Personal attributes that contribute to employability were also identified in the report but are not part of the Employability Skills Framework.

Employability Skills Framework

The following table contains the Employability Skills facets identified in the report *Employability Skills for the Future*.

Skill	Facets Aspects of the skill that employers identify as important. The nature and application of these facets will vary depending on industry and job type.
Communication that contributes to productive and harmonious relations across employees and customers	<ul style="list-style-type: none"> • listening and understanding • speaking clearly and directly • writing to the needs of the audience • negotiating responsively • reading independently • empathising • using numeracy effectively • understanding the needs of internal and external customers • persuading effectively • establishing and using networks • being assertive • sharing information • speaking and writing in languages other than English
Teamwork that contributes to productive working relationships and outcomes	<ul style="list-style-type: none"> • working across different ages irrespective of gender, race, religion or political persuasion • working as an individual and as a member of a team • knowing how to define a role as part of the team

	<ul style="list-style-type: none"> • applying teamwork to a range of situations e.g. futures planning and crisis problem solving • identifying the strengths of team members • coaching and mentoring skills, including giving feedback
Problem solving that contributes to productive outcomes	<ul style="list-style-type: none"> • developing creative, innovative and practical solutions • showing independence and initiative in identifying and solving problems • solving problems in teams • applying a range of strategies to problem solving • using mathematics, including budgeting and financial management to solve problems • applying problem-solving strategies across a range of areas • testing assumptions, taking into account the context of data and circumstances • resolving customer concerns in relation to complex project issues
Initiative and enterprise that contribute to innovative outcomes	<ul style="list-style-type: none"> • adapting to new situations • developing a strategic, creative and long-term vision • being creative • identifying opportunities not obvious to others • translating ideas into action • generating a range of options • initiating innovative solutions
Planning and organising that contribute to long and short-term strategic planning	<ul style="list-style-type: none"> • managing time and priorities - setting time lines, coordinating tasks for self and with others • being resourceful • taking initiative and making decisions • adapting resource allocations to cope with contingencies • establishing clear project goals and deliverables

	<ul style="list-style-type: none"> • allocating people and other resources to tasks • planning the use of resources, including time management • participating in continuous improvement and planning processes • developing a vision and a proactive plan to accompany it <ul style="list-style-type: none"> • predicting - weighing up risk, evaluating alternatives and applying evaluation criteria • understanding basic business systems and their relationships • collecting, analysing and organising information
Self-management that contributes to employee satisfaction and growth	<ul style="list-style-type: none"> • having a personal vision and goals • evaluating and monitoring own performance • having knowledge and confidence in own ideas and visions • articulating own ideas and visions • taking responsibility
Learning that contributes to ongoing improvement and expansion in employee and company operations and outcomes	<ul style="list-style-type: none"> • managing own learning • contributing to the learning community at the workplace • using a range of mediums to learn - mentoring, peer support and networking, IT and courses • applying learning to technical issues (e.g. learning about products) and people issues (e.g. interpersonal and cultural aspects of work) • having enthusiasm for ongoing learning • being willing to learn in any setting - on and off the job • being open to new ideas and techniques • being prepared to invest time and effort in learning new skills • acknowledging the need to learn in order to accommodate change
Technology that contributes to the	<ul style="list-style-type: none"> • having a range of basic IT skills

effective carrying out of tasks	<ul style="list-style-type: none"> • applying IT as a management tool • using IT to organise data • being willing to learn new IT skills • having the OHS knowledge to apply technology • having the appropriate physical capacity
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Employability Skills Summary

An Employability Skills Summary exists for each qualification. Summaries provide a lens through which to view Employability Skills at the qualification level and capture the key aspects or facets of the Employability Skills that are important to the job roles covered by the qualification. Summaries are designed to assist trainers and assessors to identify and include important industry application of Employability Skills in learning and assessment strategies. The following is important information for trainers and assessors about Employability Skills Summaries.

- Employability Skills Summaries provide examples of how each skill is applicable to the job roles covered by the qualification.
- Employability Skills Summaries contain general information about industry context which is further explained as measurable outcomes of performance in the units of competency in each qualification.
- The detail in each Employability Skills Summary will vary depending on the range of job roles covered by the qualification in question.
- Employability Skills Summaries are not exhaustive lists of qualification requirements or checklists of performance (which are separate assessment tools that should be designed by trainers and assessors after analysis at the unit level).
- Employability Skills Summaries contain information that may also assist in building learners' understanding of industry and workplace expectations.
-

Industry Requirements for Employability Skills

This is a technology based industry and a key role of operations personnel is the solving of problems. They are largely self managed and are expected to operate in both permanent and *ad hoc* teams as required. The communication of key safety, health, environmental and operational information to other personnel on site is a vital requirement.

Assessment Guidelines

Introduction

These Assessment Guidelines provide the endorsed framework for assessment of units of competency in this Training Package. They are designed to ensure that assessment is consistent with the *Australian Quality Training Framework (AQTF) Essential Standards for Initial and Continuing Registration*. Assessments against the units of competency in this Training Package must be carried out in accordance with these Assessment Guidelines.

Assessment System Overview

This section provides an overview of the requirements for assessment when using this Training Package, including a summary of the AQTF requirements; licensing/registration requirements; and assessment pathways.

Quality assessment underpins the credibility of the vocational education and training sector. The Assessment Guidelines of a Training Package are an important tool in supporting quality assessment.

Assessment within the National Skills Framework is the process of collecting evidence and making judgements about whether competency has been achieved to confirm whether an individual can perform to the standards expected in the workplace, as expressed in the relevant endorsed unit of competency.

Assessment must be carried out in accordance with the:

- benchmarks for assessment
- specific industry requirements
- principles of assessment
- rules of evidence
- assessment requirements set out in the AQTF

Benchmarks for Assessment

The endorsed units of competency in this Training Package are the benchmarks for assessment. As such, they provide the basis for nationally recognised Australian Qualifications Framework (AQF) qualifications and Statements of Attainment issued by Registered Training Organisations (RTOs).

Principles of Assessment

All assessments carried out by RTOs are required to demonstrate compliance with the principles of assessment:

- validity
- reliability
- flexibility
- fairness
- sufficiency

These principles must be addressed in the:

design, establishment and management of the assessment system for this Training Package development of assessment tools, and the conduct of assessment.

Validity

Assessment is valid when the process is sound and assesses what it claims to assess. Validity requires that:

- | | |
|-----|---|
| (a) | assessment against the units of competency must cover the broad range of skills and knowledge that are essential to competent performance |
|-----|---|

(b)	assessment of knowledge and skills must be integrated with their practical application
(c)	judgement of competence must be based on sufficient evidence (that is, evidence gathered on a number of occasions and in a range of contexts using different assessment methods). The specific evidence requirements of each unit of competency provide advice on sufficiency

Reliability

Reliability refers to the degree to which evidence presented for assessment is consistently interpreted and results in consistent assessment outcomes. Reliability requires the assessor to have the required competencies in assessment and relevant vocational competencies (or to assess in conjunction with someone who has the vocational competencies). It can only be achieved when assessors share a common interpretation of the assessment requirements of the unit(s) being assessed.

Flexibility

To be flexible, assessment should reflect the candidate's needs; provide for recognition of competencies no matter how, where or when they have been acquired; draw on a range of methods appropriate to the context, competency and the candidate; and support continuous competency development.

Fairness

Fairness in assessment requires consideration of the individual candidate's needs and characteristics, and any reasonable adjustments that need to be applied to take account of them. It requires clear communication between the assessor and the candidate to ensure that the candidate is fully informed about, understands and is able to participate in, the assessment process, and agrees that the process is appropriate. It also includes an opportunity for the person being assessed to challenge the result of the assessment and to be reassessed if necessary.

Sufficiency

Sufficiency relates to the quality and quantity of evidence assessed. It requires collection of enough appropriate evidence to ensure that all aspects of competency have been satisfied and that competency can be demonstrated repeatedly. Supplementary sources of evidence may be necessary. The specific evidence requirements of each unit of competency provide advice on sufficiency. Sufficiency is also one of the rules of evidence.

Rules of Evidence

The rules of evidence guide the collection of evidence that address the principles of validity and reliability, guiding the collection of evidence to ensure that it is valid, sufficient, current and authentic.

Valid

Valid evidence must relate directly to the requirements of the unit of competency. In ensuring evidence is valid, assessors must ensure that the evidence collected supports demonstration of the outcomes and performance requirements of the unit of competency together with the knowledge and skills necessary for competent performance. Valid evidence must encapsulate the breadth and depth of the unit of competency, which will necessitate using a number of different assessment methods.

Sufficient

Sufficiency relates to the quality and quantity of evidence assessed. It requires collection of enough appropriate evidence to ensure that all aspects of competency have been satisfied and that competency can be demonstrated repeatedly. Supplementary sources of evidence may be necessary. The specific evidence requirements of each unit of competency provide advice on sufficiency.

Current

In assessment, currency relates to the age of the evidence presented by a candidate to demonstrate that they are still competent. Competency requires demonstration of current performance, so the evidence collected must be from either the present or the very recent past.

Authentic

To accept evidence as authentic, an assessor must be assured that the evidence presented for assessment is the candidate's own work.

Assessment Requirements of the Australian Quality Training Framework

Assessment leading to nationally recognised AQF qualifications and Statements of Attainment in the vocational education and training sector must meet the requirements of the AQTF as expressed in the AQTF 2010 *Essential Standards for Registration*.

The AQTF 2010 *Essential Standards for Initial and Continuing Registration* can be downloaded from < www.training.com.au >.

The following points summarise the assessment requirements.

Registration of Training Organisations

Assessment must be conducted by, or on behalf of, an RTO formally registered by a State or Territory Registering Body in accordance with the AQTF. The RTO must have the specific units of competency and/or AQF qualifications on its scope of registration.

Quality Training and Assessment

Each RTO must provide quality training and assessment across all its operations. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*, Standard 1.

Assessor Competency Requirements

Each person involved in training, assessment or client service must be competent for the functions they perform. AQTF 2010 *Essential Standards for Initial and Continuing Registration*, Standard 1 for assessor (and trainer) competency requirements. See also the AQTF 2010 *Users' Guide to the Essential Standards for Registration* Appendix 2.

Assessment Requirements

The RTOs assessments, including RPL, must meet the requirements of the relevant endorsed Training Package. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

Assessment Strategies

Each RTO must have strategies for training and assessment that meet the requirements of the relevant Training Package or accredited course and are developed in consultation with industry stakeholders. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

National Recognition

Each RTO must recognise the AQF qualifications and Statements of Attainment issued by any other RTO. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

Access and Equity and Client Outcomes

Each RTO must adhere to the principles of access and equity and maximise outcomes for its clients. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

Monitoring Assessments

Training and/or assessment provided on behalf of the RTO must be monitored to ensure that it is in accordance with all aspects of the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

Recording Assessment Outcomes

Each RTO must manage records to ensure their accuracy and integrity. See the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

Issuing AQF Qualifications and Statements of Attainment

Each RTO must issue AQF qualifications and Statements of Attainment that meet the requirements of the current AQF Implementation Handbook and the endorsed Training Packages within the scope of its registration. An AQF qualification is issued once the full requirements for a qualification, as specified in the nationally endorsed Training Package are met. A Statement of Attainment is issued when an individual has completed one or more units of competency from nationally recognised qualification(s)/courses(s). See the AQTF and the edition of the AQF Implementation Handbook-available on the AQF Council website < www.aqf.edu.au>.

Awards, Licensing and other Regulatory Issues

Various awards and agreements apply within the manufacturing industry. This Training Package was designed to allow for these different arrangements. It is appropriate to use this Training Package as part of an award/agreement, but it has not been designed to fit any particular award or agreement.

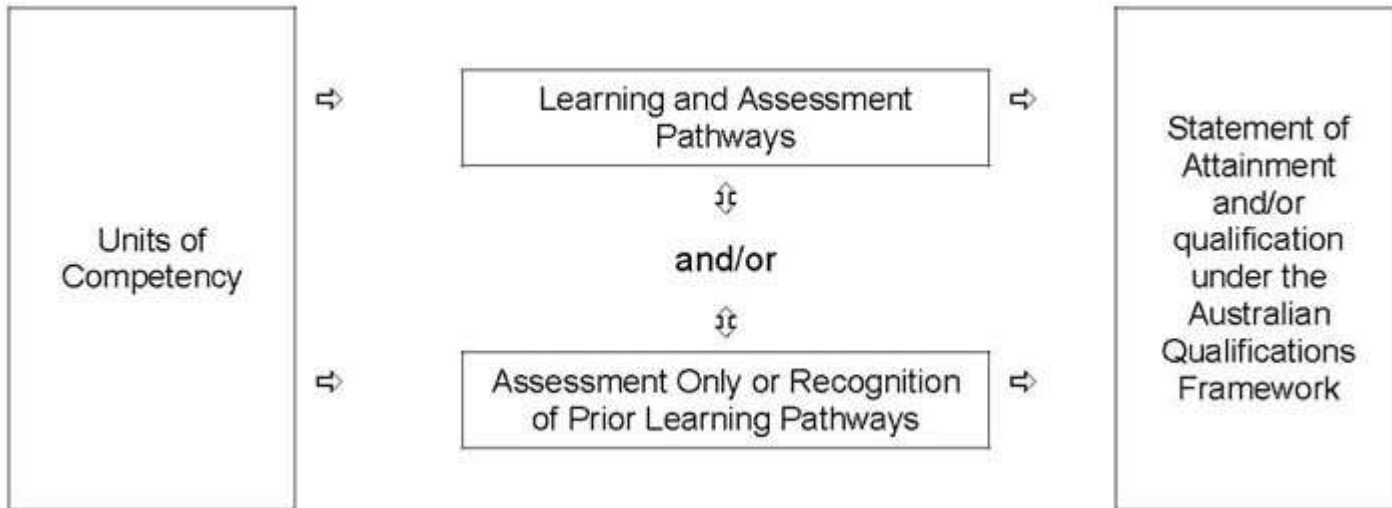
There are no general licensing issues, however specific licenses may be required in some jobs. The local regulations should be checked for details. The industry is generally subject to a range of regulatory control. These vary with the nature of the facility and to some extent on its location as most regulations are State based and many are enforced by local government. This Training Package allows for these differences without mandating them to specific units of competency which would not be appropriate.

Pathways

The competencies in this Training Package may be attained in a number of ways including through:

- formal or informal education and training
- experiences in the workplace
- general life experience, and/or
- any combination of the above.

Assessment under this Training Package leading to an AQF qualification or Statement of Attainment may follow a learning and assessment pathway, an assessment-only or recognition pathway, or a combination of the two as illustrated in the following diagram.



Each of these assessment pathways leads to full recognition of competencies held - the critical issue is that the candidate is competent, not how the competency was acquired.

Assessment, by any pathway, must comply with the assessment requirements set out in the Assessment Guidelines of the Training Package, and the AQTF, 2 where relevant, the Australian Qualifications Framework.

Learning and Assessment Pathways

Usually, learning and assessment are integrated, with assessment evidence being collected and feedback provided to the candidate at anytime throughout the learning and assessment process.

Learning and assessment pathways may include structured programs in a variety of contexts using a range of strategies to meet different learner needs. Structured learning and assessment programs could be: group-based, work-based, project-based, self-paced, action learning-based; conducted by distance or e-learning; and/or involve practice and experience in the workplace.

Learning and assessment pathways to suit Australian Apprenticeships have a mix of formal structured training and structured workplace experience with formative assessment activities through which candidates can acquire and demonstrate skills and knowledge from the relevant units of competency.

Credit Pathways

Credit is the value assigned for the recognition of equivalence in content between different types of learning and/or qualifications which reduces the volume of learning required to achieve a qualification.

Credit arrangements must be offered by all RTOs that offer Training Package qualifications. Each RTO must have a systematic institutional approach with clear, accessible and transparent policies and procedures.

Competencies already held by individuals can be formally assessed against the units of competency in this Training Package, and should be recognised regardless of how, when or where they were acquired, provided that the learning is relevant to the unit of competency outcomes.

• Recognition of Prior Learning

Recognition of Prior Learning (RPL) is an assessment process which determines the credit outcomes of an individual application for credit.

The availability of Recognition of Prior Learning (RPL) provides all potential learners with access to credit opportunities.

The recognition of prior learning pathway is appropriate for candidates who have previously attained skills and knowledge and who, when enrolling in qualifications, seek to shorten the duration of their training and either continue or commence working. This may include the following groups of people:

- existing workers;
- individuals with overseas qualifications;
- recent migrants with established work histories;
- people returning to the workplace;
- and people with disabilities or injuries requiring a change in career.

As with all assessment, RPL assessment should be undertaken by academic or teaching staff with expertise in the subject, content of skills area, as well as knowledge of and expertise in RPL assessment policies and procedures.

Assessment methods used for RPL should provide a range of ways for individuals to demonstrate that they have met the required outcomes and can be granted credit. These might include:

- questioning (oral or written) consideration of a portfolio and review of contents
consideration of third party reports and/or other documentation such as documentation such as articles, reports, project material, papers, testimonials or other products prepared by the RPL applicant that relate to the learning outcomes of the relevant qualification component
mapping of learning outcomes from prior formal or non-formal learning to the relevant qualification components
- observation of performance, and participation in structured assessment activities the individual would normally be required to undertake if they were enrolled in the qualification component/s.

In a Recognition of Prior Learning (RPL) pathway, the candidate provides current, quality evidence of their competency against the relevant unit of competency. This process may be directed by the candidate and verified by the assessor. Where the outcomes of this process indicate that the candidate is competent, structured training is not required. The RPL requirements of the AQTF must be met.

As with all assessment, the assessor must be confident that the evidence indicates that the candidate is currently competent against the endorsed unit of competency. This evidence may take a variety of forms and might include certification, references from past employers, testimonials from clients, work samples and/or observation of the candidate. The onus is on candidates to provide sufficient evidence to satisfy assessors that they currently hold the relevant competencies. In judging evidence, the assessor must ensure that the evidence of prior learning is:

- authentic (the candidate's own work); valid (directly related to the current version of the relevant endorsed unit of competency); reliable (shows that the candidate consistently meets the endorsed unit of competency); current (reflects the candidate's current capacity to perform the aspect of the work covered by the endorsed unit of competency); and
- sufficient (covers the full range of elements in the relevant unit of competency and addresses the four dimensions of competency, namely task skills, task management skills, contingency management skills, and job/role environment skills).
- **Credit Transfer**

Credit transfer is a process which provides learners with agreed and consistent credit outcomes based on equivalences in content between matched qualifications.

This process involves education institutions:

- mapping, comparing and evaluating the extent to which the defined learning outcomes and assessment requirements of the individual components of one qualification are equivalent to the learning outcomes and assessment requirements of the individual components of another qualification
- making an educational judgment of the credit outcomes to be assigned between the matched components of the two qualifications
- setting out the agreed credit outcomes in a documented arrangement or agreement, and
- publicising the arrangement/agreement and credit available.

Combination of Pathways

Credit may be awarded on the basis of a combination of credit transfer plus an individual RPL assessment for additional learning. Once credit has been awarded on the basis of RPL, subsequent credit transfer based on these learning outcomes should not include revisiting the RPL assessment but should be based on credit transfer or articulation or other arrangements between providers.

Where candidates for assessment have gained competencies through work and life experience and gaps in their competence are identified, or where they require training in new areas, a combination of pathways may be appropriate.

In such situations, the candidate may undertake an initial assessment to determine their current competency. Once current competency is identified, a structured learning and assessment program ensures that the candidate acquires the required additional competencies identified as gaps.

Assessor Requirements

This section identifies the specific requirements on the vocational competence and experience for assessors, to ensure that they meet the needs of industry and their obligations under AQTF, and clarifies how others may contribute to the assessment process where one person alone does not hold all the required competencies.

Assessor Competencies

The AQTF specifies mandatory competency requirements for assessors. For information, Element 1.4 from the AQTF 2007 *Essential Standards for Registration* follows:

1.4	Training and assessment is delivered by trainers and assessors who:
a)	have the necessary training and assessment competencies as determined by the National Quality Council or its successors, and
b)	have the relevant vocational competencies at least to the level being delivered or assessed, and
c)	can demonstrate current industry skills directly relevant to the training/assessment being undertaken, and
d)	continue developing their Vocational Education and Training (VET) knowledge and skills as well as their industry currency and trainer/assessor competence. *See AQTF 2010 <i>Users Guide to the Essential Standards for Registration</i> , Appendix 2

Designing Assessment Tools

This section provides an overview on the use and development of assessment tools.

Use of Assessment Tools

Assessment tools provide a means of collecting the evidence that assessors use in making judgments about whether candidates have achieved competency.

There is no set format or process for the design, production or development of assessment tools. Assessors may use prepared assessment tools, such as those specifically developed to support this Training Package, or they may develop their own.

Using Prepared Assessment Tools

If using prepared assessment tools, assessors should ensure these relate to the current version of the relevant unit of competency. The current unit of competency can be checked on the National Register < www.ntis.gov.au >.

Developing Assessment Tools

When developing assessment tools, assessors must ensure that they:

- are benchmarked against the relevant unit or units of competency
- are reviewed as part of the continuous improvement of assessment strategies as required under Standard 1 of the AQTF 2007
- meet the assessment requirements expressed in Standard 1 of the AQTF 2010 *Essential Standards for Initial and Continuing Registration*.

A key reference for assessors developing assessment tools is TAE10 Training and Education Training Package.

Language, Literacy and Numeracy

The design of assessment tools must reflect the language, literacy and numeracy competencies required for the performance of a task in the workplace and not exceed these expectations.

Conducting Assessment

This section details the mandatory assessment requirements and provides information on equity in assessment including reasonable adjustment.

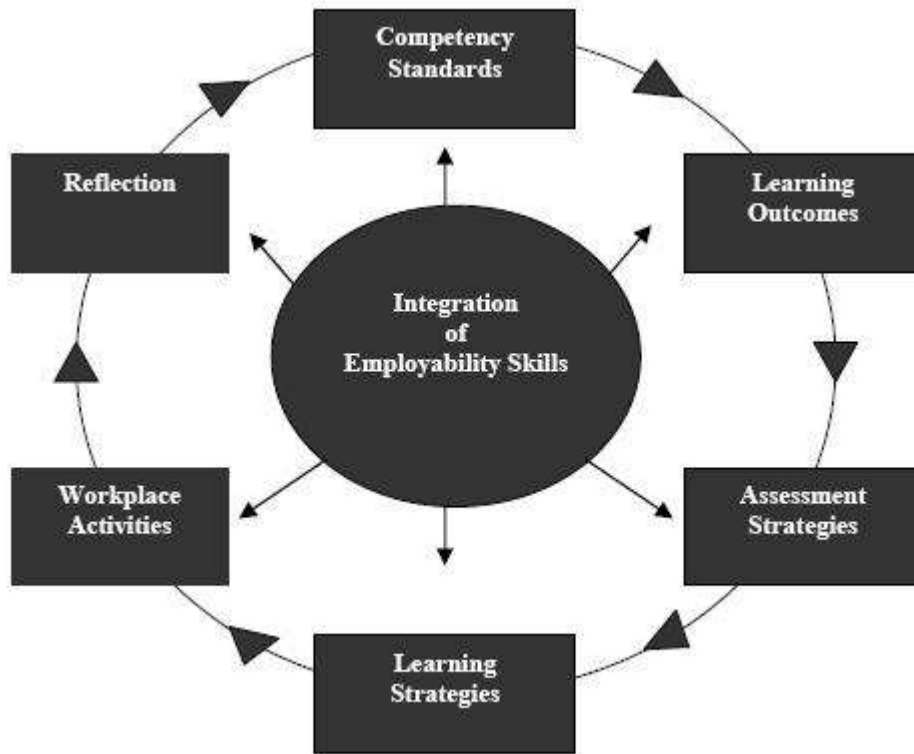
Mandatory Assessment Requirements

Assessments must meet the criteria set out in the 2010 *Essential Standards for Initial and Continuing Registration*. For information, the mandatory assessment requirements from Standard 1 from the AQTF 2010 *Essential Standards for Initial and Continuing Registration* are as follows:

1.5		Assessment, including Recognition of Prior Learning:
	a)	meets the requirements of the relevant Training Package or accredited course,
	b)	is conducted in accordance with the principles of assessment and the rules of evidence, and
	c)	meets workplace and, where relevant, regulatory requirements.
	d)	is systematically validated.

Assessment of Employability Skills

Employability Skills are integral to workplace competency. As such they must be considered in the design, customisation, delivery and assessment of vocational education and training programs in an integrated and holistic way, as represented diagrammatically below.



Employability Skills are embedded and explicit within each unit of competency, and an Employability Skills Summary is available for each qualification. Training providers must use Employability Skills information in order to design valid and reliable training and assessment strategies. This analysis could include:

- reviewing units of competency to locate relevant Employability Skills and determine how they are applied within the unit
- analysing the Employability Skills Summary for the qualification in which the unit or units are packaged to help clarify relevant industry and workplace contexts and the application of Employability Skills at that qualification outcome
- designing training and assessment to address Employability Skills requirements.

Employability Skills in the Furnishing Training Package context

For more information on Employability Skills in **Manufacturing Skills Australia** Training Packages go to the Manufacturing Skills Australia website at www.mskills.com.au.

The National Quality Council has endorsed a model for assessing and reporting Employability Skills, which contains further suggestions about good practice strategies in teaching, assessing, learning and reporting Employability Skills. The model is available from <<http://www.training.com.au/>>.

The endorsed approach includes learners downloading qualification specific Employability Skills Summaries for Training Package qualifications from an online repository at <<http://employabilityskills.training.com.au>>

For more information on Employability Skills in Manufacturing Industry Skills Council Training

Packages go to the Manufacturing Industry Skills Council website at <http://www.mskills.com.au>.

Employability Skills are reported on each qualification using the following statement on the qualification testamur: "A summary of the Employability Skills developed through this qualification can be downloaded from <http://employabilityskills.training.com.au> "

Access and Equity

An individual's access to the assessment process should not be adversely affected by restrictions placed on the location or context of assessment beyond the requirements specified in this Training Package: training and assessment must be bias-free.

Under the rules for their development, Training Packages must reflect and cater for the increasing diversity of Australia's VET clients and Australia's current and future workforce. The flexibilities offered by Training Packages should enhance opportunities and potential outcomes for all people so that we can all benefit from a wider national skills base and a shared contribution to Australia's economic development and social and cultural life.

Reasonable adjustments

It is important that education providers take meaningful, transparent and reasonable steps to consult, consider and implement reasonable adjustments for students with disability.

Under the *Disability Standards for Education 2005*, education providers must make reasonable adjustments for people with disability to the maximum extent that those adjustments do not cause that provider unjustifiable hardship. While "reasonable adjustment" and "unjustifiable hardship" are different concepts and involve different considerations, they both seek to strike a balance between the interests of education providers and the interests of students with and without disability.

An adjustment is any measure or action that a student requires because of their disability, and which has the effect of assisting the student to access and participate in education and training on the same basis as students without a disability. An adjustment is reasonable if it achieves this purpose while taking into account factors such as the nature of the student's disability, the views of the student, the potential effect of the adjustment on the student and others who might be affected, and the costs and benefits of making the adjustment.

An education provider is also entitled to maintain the academic integrity of a course or program and to consider the requirements or components that are inherent or essential to its nature when assessing whether an adjustment is reasonable. There may be more than one adjustment that is reasonable in a given set of circumstances; education providers are required to make adjustments that are reasonable and that do not cause them unjustifiable hardship. The Training Package Guidelines provides more information on reasonable adjustment, including examples of adjustments. *Go to* <http://www.deewr.gov.au/tpdh/Pages/home.aspx>.

Assessment in the Furnishing Industry

The furnishing industry places premium on skills and knowledge that can be demonstrated in a real workplace environment. While assessment of some of the Units of Competency in the Furnishing Training Package can be carried out in a simulated work environment, the industry strongly recommends that assessment is conducted in the workplace, wherever possible.

Assessment of competency requires the collection of evidence and this should be conducted over a period of time. This assessment approach may include demonstration at the workplace and/or a simulated work environment to ensure that the demonstration of competency is valid and reliable. The individual being assessed needs to be aware that the collection of evidence is ongoing and needs to be part of the planning, conduct and review of the assessment process.

Supporting Integrated Training Delivery and Assessment

As a general principle, the furnishing industry supports the integration of Units of Competency for assessment, where practical, as this reflects real work practices.

An integrated approach to assessment brings together a number of Units of Competency, which reflect actual workplace requirements. For example, an employee working in a furnishing factory would complete a number of interrelated production and occupational, health and safety tasks together, not simply one individual task at a time. An integrated assessment activity would be designed to collect evidence for a number of units together rather than designing one assessment activity for each individual element of performance criteria.

Where both training and assessment are required, the industry supports an approach which provides for off-the-job training combined with assessment of the application of skills and knowledge in a real work situation.

The Furnishing Training Package defines on-the-job assessment as that assessment which occurs in the workplace as part of the normal operation of the business.

The Furnishing Training Package defines off-the-job assessment as that which occurs away from the normal operation of the business including, for example, assessment which may occur in the workplace but not under normal industry working conditions. The industry considers it important that candidates should have the opportunity to develop competency in structured learning programs which includes assessing in the workplace whenever possible. It would be expected that where an integrated competency assessment approach is implemented that several integrated competency assessments would be necessary to cover the breadth and complexity of the qualification, at Certificate II and above.

The context of the assessment, the role of the candidate and the complexity of the task will influence how many Units of Competency will be integrated.

Further Sources of Information

The section provides a listing of useful contacts and resources to assist assessors in planning, designing, conducting and reviewing of assessments against this Training Package.

Contacts

Manufacturing Skills Australia

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NORTH SYDNEY NSW 2060

PO Box 289

NORTH SYDNEY NSW 2059

Telephone: (02) 9955 5500

Fax: (02) 02 9955 8044

Web: www.mskills.com.au email: info@mskills.com.au

Technical and Vocational Education and Training (TVET) Australia Limited

Level 21, 390 St Kilda Road, Melbourne VIC 3150

PO Box 12211, A"Beckett Street Post Office

Melbourne Victoria 8006

Ph: +61 3 9832 8100

Fax: +61 3 9832 8198

Email: sales@tvetaustralia.com.au

Web: www.tvetaustralia.com.au

For information on the TAE10 Training and Education Training Package contact: Innovation & Business Skills Australia

Telephone: (03) 9815 7000

Facsimile: (03) 9815 7001

Email: virtual@ibsa.org.au

Web: www.ibsa.org.au

General Resources

AQF Implementation Handbook, Fourth Edition 2007. Australian Qualifications Framework Advisory Board, 2002 < www.aqf.edu.au>

Australian Quality Training Framework (AQTF) and AQTF 2010 Users" Guide to the Essential Standards for Registration

<http://www.training.com.au/pages/menuitem5cbe14d51b49dd34b225261017a62dbc.aspx>

For general information and resources go to <http://www.training.com.au/>

The National Register is an electronic database providing comprehensive information about RTOs, Training Packages and accredited courses - < www.ntis.gov.au>

The Training Package Development Handbook site provides National Quality Council policy for the development of Training Packages. The site also provides guidance material for the application of that policy, and other useful information and links.

<http://www.deewr.gov.au/Skills/Overview/Policy/TPDH/Pages/main.aspx>

Assessment Resources

Registered training organisations (RTOs) are at the forefront of vocational education and training (VET) in Australia. They translate the needs of industry into relevant, quality, client-focussed training and assessment.

RTOs should strive for innovation in VET teaching and learning practices and develop highly flexible approaches to assessment which take cognisance of specific needs of learners, in order to improve delivery and outcomes of training.

Resources can be purchased or accessed from: TVET Australia provides an integrated service to enable users of the national training system to identify and acquire training materials, identify copyright requirements and enter licenses for use of that material consistent with the scope and direction of the NQC. <http://www.productservices.tvetaustralia.com.au/>

Competency Standards

What is competency?

The broad concept of industry competency concerns the ability to perform particular tasks and duties to the standard of performance expected in the workplace. Competency requires the application of specified skills, knowledge and attitudes relevant to effective participation in an industry, industry sector or enterprise.

Competency covers all aspects of workplace performance and involves performing individual tasks; managing a range of different tasks; responding to contingencies or breakdowns; and, dealing with the responsibilities of the workplace, including working with others. Workplace competency requires the ability to apply relevant skills, knowledge and attitudes consistently over time and in the required workplace situations and environments. In line with this concept of competency Training Packages focus on what is expected of a competent individual in the workplace as an outcome of learning, rather than focussing on the learning process itself.

Competency standards in Training Packages are determined by industry to meet identified industry skill needs. Competency standards are made up of a number of units of competency each of which describes a key function or role in a particular job function or occupation. Each unit of competency within a Training Package is linked to one or more AQF qualifications.

Contextualisation of Units of Competency by RTOs

Registered Training Organisation (RTOs) may contextualise units of competency to reflect local outcomes required. Contextualisation could involve additions or amendments to the unit of competency to suit particular delivery methods, learner profiles, specific enterprise equipment requirements, or to otherwise meet local needs. However, the integrity of the overall intended outcome of the unit of competency must be maintained.

Any contextualisation of units of competency in this endorsed Training Package must be within the bounds of the following advice. In contextualising units of competency, RTOs:

- must not remove or add to the number and content of elements and performance criteria
- may add specific industry terminology to performance criteria where this does not distort or narrow the competency outcomes
- may make amendments and additions to the range statement as long as such changes do not diminish the breadth of application of the competency and reduce its portability, and/or
- may add detail to the evidence guide in areas such as the critical aspects of evidence or resources and infrastructure required where these expand the breadth of the competency but do not limit its use.

Components of Units of Competency

The components of units of competency are summarised below, in the order in which they appear in each unit of competency.

Unit Title

The unit title is a succinct statement of the outcome of the unit of competency. Each unit of competency title is unique, both within and across Training Packages.

Unit Descriptor

The unit descriptor broadly communicates the content of the unit of competency and the skill area it addresses. Where units of competency have been contextualised from units of competency from other endorsed Training Packages, summary information is provided. There may also be a brief second paragraph that describes its relationship with other units of competency, and any licensing requirements.

Employability Skills statement

A standard Employability Skills statement appears in each unit of competency. This statement directs trainers and assessors to consider the information contained in the Employability Skills Summary in which the unit of competency is packaged.

Prerequisite Units (optional)

If there are any units of competency that must be completed before the unit, these will be listed.

Application of the Unit

This sub-section fleshes out the unit of competency's scope, purpose and operation in different contexts, for example, by showing how it applies in the workplace.

Competency Field (Optional)

The competency field either reflects the way the units of competency are categorised in the Training Package or denotes the industry sector, specialisation or function. It is an optional component of the unit of competency.

Sector (optional)

The industry sector is a further categorisation of the competency field and identifies the next classification, for example an elective or supervision field.

Elements of Competency

The elements of competency are the basic building blocks of the unit of competency. They describe in terms of outcomes the significant functions and tasks that make up the competency.

Performance Criteria

The performance criteria specify the required performance in relevant tasks, roles, skills and in the applied knowledge that enables competent performance. They are usually written in passive voice. Critical terms or phrases may be written in bold italics and then defined in range statement, in the order of their appearance in the performance criteria.

Required Skills and Knowledge

The essential skills and knowledge are either identified separately or combined. Knowledge identifies what a person needs to know to perform the work in an informed and effective manner. Skills describe the application of knowledge to situations where understanding is converted into a workplace outcome.

Range Statement

The range statement provides a context for the unit of competency, describing essential operating conditions that may be present with training and assessment, depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts. As applicable, the meanings of key terms used in the performance criteria will also be explained in the range statement.

Evidence Guide

The evidence guide is critical in assessment as it provides information to the Registered Training Organisation (RTO) and assessor about how the described competency may be demonstrated. The evidence guide does this by providing a range of evidence for the assessor to make determinations, and by providing the assessment context. The evidence guide describes:

- conditions under which competency must be assessed including variables such as the assessment environment or necessary equipment
- relationships with the assessment of any other units of competency
- suitable methodologies for conducting assessment including the potential for workplace simulation
- resource implications, for example access to particular equipment, infrastructure or situations
- how consistency in performance can be assessed over time, various contexts and with a range of evidence, and expectations at the AQF qualification level involved.

Employability Skills in units of competency

The detail and application of Employability Skills facets will vary according to the job-role requirements of each industry. In developing Training Packages, industry stakeholders are consulted to identify appropriate facets of Employability Skills which are incorporated into the relevant units of competency and qualifications.

Employability Skills are not a discrete requirement contained in units of competency (as was the case with Key Competencies). Employability Skills are specifically expressed in the context of the work outcomes described in units of competency and will appear in elements, performance criteria, range statements and evidence guides. As a result, users of Training Packages are required to review the entire unit of competency in order to accurately determine Employability Skills requirements.

How Employability Skills relate to the Key Competencies

The eight nationally agreed Employability Skills now replace the seven Key Competencies in Training Packages. Trainers and assessors who have used Training Packages prior to the introduction of Employability Skills may find the following comparison useful.

Employability Skills	Mayer Key Competencies
Communication	Communicating ideas and information
Teamwork	Working with others and in teams
Problem solving	Solving problems Using mathematical ideas and techniques
Initiative and enterprise	
Planning and organising	Collecting, analysing and organising information Planning and organising activities
Self-management	
Learning	
Technology	Using technology

When analysing the above table it is important to consider the relationship and natural overlap of Employability Skills. For example, using technology may involve communication skills and combine the understanding of mathematical concepts.

Explicitly embedding Employability Skills in units of competency

This Training Package seeks to ensure that industry-endorsed Employability Skills are explicitly embedded in units of competency. The application of each skill and the level of detail included in each part of the unit will vary according to industry requirements and the nature of the unit of competency.

Employability Skills must be both explicit and embedded within units of competency. This means that Employability Skills will be:

- embedded in units of competency as part of the other performance requirements that make up the competency as a whole
- explicitly described within units of competency to enable Training Packages users to identify accurately the performance requirements of each unit with regards to Employability Skills.

This Training Package also seeks to ensure that Employability Skills are well-defined and written into units of competency so that they are apparent, clear and can be delivered and assessed as an essential component of unit work outcomes.

The following table contains examples of embedded Employability Skills for each component of a unit of competency. Please note that in the examples below the bracketed skills are provided only for clarification and will not be present in units of competency within this Training Package.

Example Employability Skills unit

Unit component	Example of embedded Employability Skill
Unit Title	Design residential interiors (Initiative and enterprise, problem solving, planning and organising, self management).
Unit Descriptor	This unit describes the knowledge and skills required to apply researched information to formulate creative and complex design solutions to a range of residential interior design situations satisfying the physiological, psychological, social, cultural and environmental requirements of the brief. (Initiative and enterprise, problem solving, self management, planning and organising, communication).
Element	Design the space (Technology, planning and organising, communication, problem solving).
Performance Criteria	Ideas are translated into 3-D space satisfying functional criteria. (Problem solving, technology, initiative and enterprise, planning and organising).
Range Statement	Resources may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS) journals (directions magazines), artistic equipment and products, and

	model making equipment. (Technology, learning, self management).
Required Skills and Knowledge	Applying principles and elements of design. (Initiative and enterprise, problem solving, learning, planning and organising).
Evidence Guide	Effectively design for at least two residential interiors to provide the client with creative solutions that satisfy the design brief. (Initiative and enterprise, communication, problem solving, planning and organising).

Example Employability Skills unit

Unit component	Example of embedded Employability Skill
Unit Title	Design residential interiors (Initiative and enterprise, problem solving, planning and organising, self management).
Unit Descriptor	This unit describes the knowledge and skills required to apply researched information to formulate creative and complex design solutions to a range of residential interior design situations satisfying the physiological, psychological, social, cultural and environmental requirements of the brief. (Initiative and enterprise, problem solving, self management, planning and organising, communication).
Element	Design the space (Technology, planning and organising, communication, problem solving).
Performance Criteria	Ideas are translated into 3-D space satisfying functional criteria. (Problem solving, technology, initiative and enterprise, planning and organising).
Range Statement	Resources may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS) journals (directions magazines), artistic equipment and products, and model making equipment. (Technology, learning, self management).
Required Skills and Knowledge	Applying principles and elements of design. (Initiative and enterprise, problem solving, learning, planning and organising).
Evidence Guide	Effectively design for at least two residential interiors to provide the client with creative solutions that satisfy the design brief. (Initiative and enterprise, communication, problem solving, planning and organising).

Competency Standards - Industry Contextualisation

Units of competency may, and in some cases should, be contextualised to the sub-sector and type of work environment involved. Contextualisation which:

- replaces general directions with enterprise specific needs
- replaces generic equipment/process names with enterprise specific names
- replaces general processes/specifications with enterprise specific needs

is allowed and encouraged, provided the contextualised unit is of similar level and rigour to the original unit of competency.

Note that contextualising cannot be used to generate an additional competency which is closely related to an existing competency. Contextualisation can only be used to generate an alternative competency for qualifications purposes.

Contextualisation may only be done if it does not significantly change the level and rigour or change the application of the unit of competency. Contextualisation may be done within the required knowledge, range of variables and the evidence guide. Lists in these sections should be regarded as indicative lists unless otherwise stated.

Note also that contextualisation of the elements or performance criteria is not permitted. As a minimum, the contextualised unit of competency should:

- be of similar level and rigour
- be of a similar breadth, complexity and size
- be relevant to the industry sector and the enterprise
- not reduce the health, safety or environmental requirements
- retain the original unit code and title.

New units

Where there is no suitable equivalent unit of competency in any endorsed Training Package that can be used or contextualised to the enterprise's requirements, new units of competency may be developed and submitted to DEEWR via Manufacturing Skills Australia (MSA) for endorsement and inclusion in the Training Package. Any proposed new units of competency will be treated as a 'Category 2' change under the DEEWR continuous improvement guidelines and must be endorsed by the National Quality Council for listing on the National Training Information Service.

Importing units from other Training Packages

Units of competency may be imported from another endorsed Training Package to customise a qualification. These imported units of competency may be used to replace the maximum number of imported units that are identified in the packaging rules. The use of imported units of competency is allowed if:

- they are from an endorsed Training Package and are packaged at the same AQF certificate level (the original unit title and code number must be retained)
- they are appropriate to the needs of the enterprise
- any prerequisites and co-requisites specified in the original unit and any specific assessment requirements in the host Training Package are also observed.

Exporting units to other Training Packages

Manufacturing Skills Australia encourages other industries and ISCs to access the units of competency in this Training Package which might be appropriate to their needs. These units of competency may be used provided:

- the original unit code and title are retained
- they are only contextualised to the extent permitted above

- any specified prerequisites and co-requisites and any specific assessment requirements in the host Training Package are observed.

Manufacturing Skills Australia is advised of the specific competencies to be used to facilitate ongoing communication in the event of an update.

Appendix A: Version 1

Project team

Sue Woodward	General Manager: Light Manufacturing Training Australia
Jack Cunningham	Project Coordinator: Light Manufacturing Training Australia
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Bob Cooper	Consultant: BCA Training & Development Services Pty Ltd
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Special thanks to the furnishing company managers and staff who generously contributed their valuable time to the production of the photography reproduced on the covers of each volume of this Furnishing Training Package.

Steering Committee and Consultation Groups

Acknowledgements

The development of the Furnishing Training Package involved extensive consultation processes. In addition to people directly involved in the formal development processes, many more were invited to participate in review and feedback processes.

Manufacturing Skills Australia and the members of the project National Steering Committee wish to recognise the invaluable assistance offered by the members of the National Technical Advisory Groups and others in the following lists who involved themselves in development and feedback activities.

Manufacturing Skills Australia also wishes to acknowledge the contribution made by the Executive Officers and staff of the national ITAB Network.

National Steering Committee Members

Surname	Preferred Name	Organisation
Bellaver	Morrie	Qld DEET and National STA Representative
Broun	Penny	SFIAA
Bushby	Russell	Russette Furniture Pty Ltd and Chair QLMITAB

Connell	Gavan	Oak Enterprises and Tasmanian Representative
Court	Gil	NT Major Industries TAC
Doran	Mick	CFMEU FFTS Division
Hoare	David	Light Manufacturing Training Australia Chair
Kruize	Laurie	HIA/NKBA
Lewis	Martin	FIAA NSW
Luckins	Peter	Peacock Furniture Pty Ltd and Chair NSC
McAuliffe	Ted	Eastyle Furniture and FIAA Vic/Tas
Petersen	Ross	NSW State Furnishing Training Centre and National Provider Representative

Members of National Technical Advisory Groups (TAGs)

Surname	Preferred Name	Sector	Organisation
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Amann	Gordon	FT	TAFE North Coast NSW
Angove	Graham	MB	R B Day
Ashley	Philip	FM	TAFE Holmesglen College
Bassett	Phillip	FT	TAFE Sydney Institute
Beadman	Gayle	SF	Mardaw Soft Furnishers Pty Ltd
Bonasia	Tony	PF	Arts & Graphics
Brack	Peter	FC	Chippendale
Bradshaw	Lyndon	GG	Pilkington Glass
Bramich	Ernie	GG	Glass & Glazing & Interior Design Services
Brice	Ray	FC	Floor Covering Industry Suppliers Assn of SA
Brice	Sharon	FC	Australian Floor Covering Consultants

Brickhill	Howard	GG	Walsh's Glass
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Burrows	Brian	FC	Australian Safety floors
Canala	Peter	FM	Ambro
Coles	Brenton	FC	Tarket Sommer Australia
Cook	Ian	FM	Alexander J Cook
Cook	Ian	FT	Alexander J Cook
Court	Gil	FF	NT Major Industries TAC
Court	Gil	FM	NT Major Industries TAC
Court	Gil	FT	NT Major Industries TAC
Dalton	Wayne	MB	Dunlop Bedding
Dunbar	Chris	FT	TAFE Douglas Mawson
Esterman	Joe	FT	TAFE Bunbury
Farrington	Linda	FM	Studentworks
Gardiner	Stuart	MB	Slumbercare
Goodwin	David	FC	TAFE
Gosatti	Carlo	FM	Inglewood Products
Gosatti	Carlo	FT	Inglewood Products
Hampton	Steve	SF	Curtain Man
Hansen	Chris	FC	Northern Lifestyle
Harris	Bernadette	FT	Harris Bromley Pty Ltd
Harford	Barbara	SF	Manor Blinds and Curtains
Heydon	Mark	PF	Creative Framing
Hopgood	Bruce	FC	Premium Floors
Hughes	Christine	SF	TAFE Launceston
Hunter	Leo	FC	Integrity Cork and Floor Sanding Pty Ltd

Kelly	Mark	MB	Victorian ITAB
Kirby	Steve	MB	Joyce Foam products
Knight	Bob	SF	Knight's Quality Window Fashions
Kolanowski	Brian	FC	Shoey,s Floorcoverings
Kroon	Ferdie	GG	Tas Glass and Aluminium Assn
Langworthy	Brian	FT	TAFE Box Hill
Longley	Wayne	MB	Sealy of Australia
Mackie	Jim	GG	Architectural Glass Products
Maher	Jeff	PF	Bevelled Edge
Matthews	Terry	FC	Supreme Carpets 1
Millard	Gary	UP	Moran Australia
Milne	Alex	FT	Illaring Pty Ltd
Milne	Alex	FM	Illaring Pty Ltd
Moore	Darryl	UP	TAFE SA
Murley	Barry	FC	Boronia
Nieuwhof	Michael	FF	Toledo Furniture
Norlin	Kerry	FT	TAFE SEMC
Patten	Jeff	FM	TAFE Qld
Poole	Amanda	FC	Perth timber Floors
Poole	Mark	FF	Mirotone Pty Ltd
Porter	Rod	GG	Brisbane Mirror Company
Pursell	Adrian	MB	SupaRest Bedding Pty Ltd
Rattray	Rob	FF	TAFE, Launceston
Rattray	Rob	FT	TAFE, Launceston
Rattray	Rob	UP	TAFE, Launceston
Reinhardt	Paul	UP	Janda Furniture

Reizner	Martina	FM	Reisner Workshops
Rowswell	Stuart	GG	Chevron Glass
Scalisi	Vincve	UP	Scalisi Fine Upholstery
Scott	Ron	FT	Chair FIAA/FITC NSW
Simpson	Mark	FF	Redwood Furniture Polishing
Smart	Noel	UP	Queanbeyan
Smythe	Brigitte	SF	Interior Design by Brigitte Smythe
Southward	Glenn	GG	Pilkington Australia Pty Ltd
Spiering	Paul	FF	Mirotone Pty Ltd
Stanley	Bryon	FT	RMIT Furntag
Tebb	Richard	FF	R & W Tebb French Polishers
Thomas	Errol	FC	Workplace Training for the Furnishing Industry
Weekes	Stephen	FT	TAFE Noarlunga
Wells	Ian	FF	Ian Wells French Polisher
White	Chris	PF	Leppington Picture Framers
Williamson	Glenn	FF	TAFE Lidcombe
Wykes	Ian	FM	TAFE Hunter Institute

General Consultation/Participation List by Sector

Floor Covering and Finishing

Surname	Preferred Name	Organisation
Allen	Peter	Dann & Allen
Barnett	Bob	Carpet Court
Barter	Mike	TAFE Tasmania
Bidgood	Tony	BCA Training Consultant
Boyd	Robyn	West Australian Floor- coverings Association (Inc.)

Boyd	Robyn	Dunlop Flooring
Boyes	Stephen	Floor Covering House
Boyle	Tony	Tas LMITB Inc
Brack	Peter	Chippendale
Brice	Ray	Floor Covering Industry Suppliers Assn of SA
Brice	Sharon	Australian Flooring Consultants
Brow	Philip	The Timber Flooring Ass of SA Inc
Burrows	Bryan	ASF P/L
Clague	Robert	Northern Suburbs Flooring
Clark	John	John Clark Carpets
Coggins	Dave	Carpet 1
Coles	Brenton	Tarket Sommer Aust
Dale	Mike	Carpet One
Desmond	Peter	Anderson's Carpets
Eddy	Peter	Floorcovering Installers Association
Farrer	Liza	Sunstate Floor Coverings
Firth	Allan	Carpet Institute of Australia
Foletta	Bob	Interface Australia
Gibson	Steve	Flooring Innovations
Gleeson	Jim	Vibro Engineered Cement
Goodwin	David	TAFE Tasmania
Gourlay	Adam	Modern Living Carpet Court
Groves	Phil	Master Kelwin Floors
Gutherie	Allan	Floors & Alternatives
Hansen	Christine	Northern Lifestyle

Hopgood	Bruce	Premium Floors P/L
Hoppe	Gerd	Advance Carpet Choice
Hunter	Leo	Integrity Cork & Floor Sanding
Jones	David	Andersens Carpets
Kelly	Peter	Floor Covering Assn of NSW
Kelly	Peter	PKF
King	Peter	Carpet One
Kolanowski	Brian	Shoey's Floorcoverings
Kolanowski	Brian	FIAQ
Lord	Bob	Carpet Mania Carpet Court
Marios	Tony	Unique Floors
Mathews	Gary	Carrington
Matthews	Terry	Supreme Carpets
McCain	Ern	LMITB NSW Ltd
McDermott	Peter	The Good Homemakers
Millikan	Mark	Tas Floor Surfacing Co
Mole	Gary	Modern Carpet & Vinyl
Mowbray	Phil	Enviro Floors
Murley	Barry	The #1 Floor Sander & Vic TAG Rep
Nardi	Keith	Flawless Floors
Poole	Amanda	Perth Timber Floors
Rynja	Steve	Concept Carpet Court
Schuhlin	Leo	Advance Apollo Floors
Scrivin	Lee	Professional Floors
Silk	Rob	Cameron's Carpet Court
Smart	Chris	Kings Carpet Choice

Taylor	Bob	ULMITB Ltd
Thomas	Errol	Workplace Training
Vince	Bill	TAFE Tas - Team Leader of Construction Services

Furniture Finishing

Surname	Preferred Name	Organisation
Alps	Stuart	Launceston Cabinet Coy
Andreassen	Ivan	Design A Space
Bailey	Robert	Bailey Manufacturing
Bowen	Martin	ITAF Furniture P/L
Burton	Paul	Holmesglen Institute
Bush	Chris	Claremont College
Clinch	David	Custom Cabinets
Cooper	Ray	RJ & BJ Cooper
Daley	Steve	Devonfield Enterprises
Dunlop	Paul	Granny's House
Edwards	Bill	Furntech Joinery
Fair	Ian	ITAF Furniture P/L
Farrington	Linda	Studentworks
Faulkner	David	FIAA (Management)
Faulkner	Charlie	Faulkners French Polishing Services
Garreffa	Roy	Adelaide French Polishers
Gilpin	Graham	K M Smith
Hill	John	Hymark Furniture
Hodges	Gavin	Bayside Quality Furniture Restoration
Hume	John	Hume & Kerrison P/L

Hunold	Fred	Australian Door Company
Hunschke	Matthew	Matthew J Hunschke French Polisher
Hussey	Brian	Premier 2000 Polishers
Keen	Brian	Rintoul Pty Limited
Kelly	Chris	Joinery Product Sales P/L
Klein	Gerhard	Keogh Enterprises
Larsen	Craig	Design A Space
Layton	Russell	Clifton Furniture P/L
Logue	Cassie	Old & Unique Restorations
Martin	Stuart	The Martin Group
McCleneghan	Lyn	Newstead College
Murray	Gerard	FIAA Queensland
Nardecchia	Dino	Fine Art Polishing
Nardecchia	Dino	Fine Art Polishing
Nieuwhof	Michael	Toledo Furniture
Poole	Mark	Mirotone NSW
Rattray	Rob	TAFE Tasmania
Reville	Clayton	Reville Restorations
Rockcliffe	Wendy	Elizabeth College
Rodman	Leigh	Leigh Rodman Kitchens & Bathrooms
Sanford	Russell	RUV Australia
Simpson	Mark	Redwood Furniture Polishing
Speer	Judy	Tas LMITB Inc
Spiering	Paul	Mirotone Vic
Spits	Mark	Furnir
Tait	Colin	BVR Brooker Furniture

Tamplin	David	Northern Kitchen Sales
Tebb	Richard	R&W Tebb French Polisher
Turner	Mark	WL & HF Turner & Son P/L
Uljaravic	Michael	Paragon Queen Anne
Wells	Ian	Ian Wells French Polishers
Yates	Gary	FMCA

Furniture Making

Surname	Preferred Name	Organisation
Adams	Ron	Sotico
Aldridge	Ralph	Suncoast Kwila Products
Alps	Stuart	Launceston Cabinet Co
Anderson	Mark	Proform Postformer & CMA Member
Anning	Robert	Century Furniture
Armstrong	Doug	Elizabeth College
Ashley	Phillip	TAFE Holmesglen
Beumann	David	Davis Furniture
Blaha	Justin	Tessa Furniture
Bosveld	Alan	Coastline Kitchens & CMA Member
Bowler	Simon	Silverlynx
Brooker	Les	Brooker
Brooks	Richard	Cabinet Makers Assn
Brown	Michael	Studentworks
Bush	Chris	Claremonnt College
Bushby	Russell	Russette Furniture
Butterfield	Derek	Mayco Industry Pty Ltd
Caccamo	Dominic	Western Cabinets

Canala	Peter	Ambro
Canino	Bernie	Regalline Cabinets & Joinery
Chapman	Jeff	The Board Factory
Clare	William	Clarecraft
Clare	Mike	Clarecraft
Clinch	David	Custom Cabinets
Cock	Graeme	FIAA
Connell	Angela	Brisbane Institute of TAFE
Cook	Ian	Alexander J Cook
Costanza	Fortu	IJF (Australia)
Cox	Timothy	Tradway Furniture
Cox	Allen	Northcoast Joinery
Craven	Neil	FIAA
Daley	Steve	Devonfield Enterprises
Damouni	Edmund	Hatakusi Pty Ltd Antry
Doran	Mick	FFTS Division CFMEU
Drage	Arthur	West Coast College of TAFE
Drew	Alyssa	TAFE Tasmania
Duthie	Alvin & Karen	Marabou Furniture & CMA Member
Edmunds	Paul	Gabbett Woodworking
Edwards	William	Furntech (WA) Pty Ltd
Elsegood	Steve	TAFE SEMC
Esterman	Joe	South West College of TAFE
Evans	Peter	Premier Furniture Pty Ltd
Fair	Ian	ITAF Furniture
Farrington	Linda	Studentworks

Giuliani	Ciro	Wentworth Furniture Coy
Gosatti	Carlo	Inglewood Products
Grassi	Joe	IKAL Kitchens
Haddon	Gary	Haddon Kitchens
Harris	Malcolm	Circa & School of Wood
Hausler	Steve	Seaview Joinery
Hayhoe	Peter	Pesha Furniture
Hearn	Ian	FIAA (WA)
Hill	John	Hymark Furniture
Holst	Glen	Glen Holst Furniture
Howard	Graham	Southern Sydney TAFE
Hume	John	Hume & Kerrison
Hyslop	David	Wicker Manufacturers
Illings	Peter	Illings Own Fine Furniture
Johnson	Henry	Kangan Batman Inst of TAFE
Keas	Daniel	DDK Commercial Interiors
Kelly	Chris	Joinery Product Sales
Keogh	Don	Keogh Enterprises
Kidman	Lee	Kidman Furniture
Killen	Ray	IJF
Kniross	Malcolm	Kinross Furniture
Large	Julie	Workplace Employment & Training Services
Laugher	Tony	Hume & Kerrison
Layton	Russell	Clifton Furniture P/L
Leighton	Don	Spenceleigh Cabinets
Littlefield	James	Southern Sydney TAFE

Luckins	Peter	Peacock Furniture Pty Ltd
Lytton	Eric	CMA WA
Mamrott	Ed	Inset Kitchens
Martin	Stuart	The Martin Group
Mathewson	Neville	TAFE Tasmania
McCleneghan	Lyn	Newstead College
McDonald	David	BIGA
McGregor	Brett	Burgess Furniture
McIntyre	Manfred	Manfred L McIntyre
Milne	Alex	Illaring Pty Ltd
Mimmo	Joe	Carjo
Monteleone	Geoff	IJF (Australia)
Morrison	Grant	Acme Fine Furniture
Murray	Gerard	FIAA Queensland
Nieuwhof	Michael	Toledo Furniture
Norlin	Kerry	TAFE SEMC
Ong	Chuan	Sotico
Paris	David	Jah Roc Furniture
Patten	Jeff	TAFE
Perkins	Greg	Hycraft Furniture
Price	Greig	TAFE Tasmania
Prole	Bill	OJ Kitchens
Reinhardt	Paul	Janda Furniture
Reinsner	Martina	Rienzner Workshops
Riedo	John	Boutique Kitchens
Robba	Mark	Queensport Furniture

Rockliffe	Wendy	Elizabeth College
Rodman	Leigh	Leigh Rodman Kitchens & Bathrooms
Rupe	Alex	AAA Alexander
Schiavello	Michael	Schiavello Furniture
Schubert	Franz	Burqtec
Scullin	Guy	Gumnut Furniture Co
Seeds	Brad	Logan Institute of TAFE
Slack	Ron	Tessa Furniture
Smith	Geoff	Bilrite Furniture Company
Smith	Ben	Corringle Furniture
Snare	Alan	Newstead College
Speer	Judy	Tas LMIT Board Inc
Spits	Mark	Furnir
Tamplin	David	Northern Kitchen Sales
Temby	Warwick	Housing Industry Association
The Manager		K-Jay Kitchens
The Manager		Philian Wood Products
Trevaskis	Allan	School of Wood/Forest Heritage Area
Turner	Mark	WL & HF Turner & Son P/L
Uljaravic	Michael	Paragon Queen Anne
Watson	Robert	Southern Sydney TAFE
Watter	Alan	Kitchen Gallery
Williamson	Barry	Fremantle Furniture Factory
Wykes	Ian	TAFE Hunter Valley
Zappala	Frank	House of Kitchens

Glass and Glazing

Surname	Preferred Name	Organisation
Adams	Romnon	City Glass & Leadlights
Adlam	Ron	Manly Glass
Archie	Alan	G James Safety Glass
Ashton	Roger	O'brien Glass Industries
Blanksby	Don	Glass & Glazing Assn
Bradshaw	Lindon	
Bramich	Ernie	Glass & Glazing & Interior Design Services
Brickhill	Howard	Walsh's Glass
Briffa	David	Fitzroy Glass Pty Ltd
Budd	Gavin	Lidco
Campbell	Bob	Q-Build Construction Workshop
Davies	Michael	Bayside Glass & Aluminium
Davis	Lewis	Glass Supplies Pty Ltd
Doran	Mick	FFTS Division CFMEU
Fisher	Peter	Lidcombe TAFE
Fox	David	Costless Glass & Mirrors Pty Ltd
Fraraccio	Felix	Stevens Glass
Gofton	John	Kingborough Glazing
Greenwood	Chris	TAFE Construction & Transport Division
Guerin	Adrian	Central Glass
Hadfield	Wayne	TAFE (Gateway Campus)
Hayes	Greg	C James Safety Glass Pty Ltd
Hind	Bill	Pilkington Australia
Kay-Spratley	Warren	Lidcombe TAFE
Kelly	Chris	Joinery product Sales Pty Ltd

Keunhe	Stephen	G James Australia
Kovacic	Mark	Construction Glazing
Kroon	Freddie	Tas Glass & Aluminium Assn
Land	Paul	Glass Solutions
Lang	Roland	O'Briens Glass
Conrad	Gary	O'Briens Glass
Latham	Neil	TAFE Tasmania
Mackie	Jim	Architectural Glass Products
Matfin	Cliff	Martin Energy Products (Australia) Pty Ltd
McKay	Colin	Business SA
Members		Glass & Glazing Assn of WA
Nicholls	Mark	Glass & Glazing Lidcombe TAFE
Penrose	Nigel	Penrose Glass
Porter	Rod	Brisbane Mirror Company
Reidy	Alan	Holmesglen Institute of TAFE
Riley	Dennis	Lidcombe TAFE
Rowswell	Stuart	Chevron Glass
Saunders	Colin	Pilkington Glass (Hobart)
Schnell	Graham	Bradnam's Windows & Doors
Simeon	Ian	Unity Glass Pty Ltd
Smith	Janene	Colonial Glass & Leadlight
Southward	Glen	Pilkington (Aust) Ltd
Tomlinson	Bill	TAFE (Gateway Campus)
Trotman	Kevin	DMS Glass
Urban	Matt	O'brien Glass Industries
Wallace	Rodney	Pilkington Glass (Hobart)

Widger	Graham	Kingborough Glazing
Mattress and Base Making		
Surname	Preferred Name	Organisation
Angove	Graham	R B Day
Brown	Bob	AH Beard Pty Ltd
Clark	Alan	Sealy of Australia (WA)
Cole	Len	Dunlop Bedding
Cunningham	Ian	Aqua Pacific Waterbeds
Dalton	Wayne	Dunlop Bedding
Gardiner	Stuart	Slumbercare
House	Richard	Dunlop Bedding
Kaus	Jeff	Juvenator Sleep Systems Pty Ltd
Keen	David	Rolfe & Company Pty Ltd
Kelly	Paul	Vita Pacific Ltd
Kelly	Jeff	Dunlop Bedding
Kelly	Mark	FTV
Kirby	Steve	Joyce Foam Products
Longley	Wayne	Sealy of Aust
Mathieson	Tom	Brisbane Institute of TAFE
McNamara	Graeme	Therapedic of Queensland
Monks	Paul	Adriatic Slumber
Moritz	Peter	The Mattress Factory
Murray	Gerard	FIAA Queensland
Nixon	Chris	Sleepeeze Bedding Australia
Pearson	Norm	Sleepyhead Manufacturing P/L

Pitt	Robert	A.1 Waterbeds
Pruckner	Rick	Pacific Brands Household Products
Pursell	Adrian	SupaRest Bedding Pty Ltd
Reid	John	Workplace Training Pty Ltd
Ridgewell	Trevor	Joyce Corporation
Schroder	Russell	Dunlop Bedding
Speer	Judy	Tas LMITB Inc
Tyrell	Joe	Sealy
Valcone	Bill	Sleeptite Orth-A-Pedic Bedding
Vallnage	Keith	Support a Mattress
Vandersheel	Mike	Thomas Peacock & Sons P/L
Walker	Dan	Authetic Futons

Picture Framing

Surname	Initials/Preferred Name	Organisation
Adams	Sue & Peter	Adams Family Framing
Aikman	Chris & Erol	Artland
Aleksiev	Stefan	Jubilee Framers
Beale	Jennifer	Frames & Finishes
Beale	Jennifer & Geoff	Frames and Finishes
Bonasia	Tony	Arts & Graphics
Cameron	Roger	The Picture Place
Coach	Ralph	Annerley Picture Framing
Cobbin	Matthew	Gallery Newtown
Crane	Graham	GeeCee's Creative Concepts
Crawford	Neville	Recherche Specialty

Crawford	Neville	PFGV
Daley	John	Framing Specialists
Daley	John	PFGV
Filipone	Frank	Profile Magazine
Fisher	Dianne	Design Framing
Fisher	Dianne	PFGV
George	Gary	Smart Art Gallery
Gill	Helen	Maleny Picture Framing
Gordon	Brian	Brisbane Institute of TAFE
Harbison	Ross	Frame Craft
Harrison	Kathy	Totem Arts & Framing
Heydon	Mark	Creative Framing
Heydon	Mark	PFGV
Jeffreson	Adam	PFGV/Frame Rite
Klapp	Klaus	Canterbury Gallery
Klapp	Klaus	PFGV
Lauder	Ian	Matisse Picture Frames
Lorensene	Rob	Robel Framing Gallery
Lorensene	Rob	PFGV
Maher	Jeff	Bevelled Edge
Manser	Andrew & Paul	Advance Picture Framing
Matley	David	Toowong Framing Corner
Murphy	Christine & Michael	Murphy Framing
O'Rourke	Mark	PFQ
Overton	Paul	Frame Factory
Prior	Jan	Priority Framing

Prymke	Jodie	Corporate Framing Solutions
Prymke	Jodie	PFGV
Rich	Tony	Art Conservation Framers
Rich	Tony	PFGV
Roberts	David	Hang Ups Artwork & Frames
Sharrock	Craig	F G Custom Framing
Sinclair	George	Sinclair Lloyd Frames
Speer	Judy	Tas LMITAB Inc
Stifler	Roy	A & A Framers
Stockey	Julius	PFGV/Cotham Gallery 101
Taylor	Clive	Taylor Framing
Thurman	Carol	Keppel Art & Framing
Tolcher	Dianne & Geoff	The Bevelled Edge
Wagner	Luke	Luke Wagner Framemakers
Wang	Johnathon	Northside Picture Framers
Warren	Terry	Artery
White	C A	Leppington Picture Framing

Soft Furnishing

Surname	Preferred Name	Organisation
Anderson	Dean	Anderson's Soft Furnishing
Bakker	Bev	Bebak Designs
Beadman	Gail	Mardaw Soft Furnishers
Boswell	Laurel	Curtain Collection
Broun	Penny	SFIAA
Bruce	Geoffrey	Carpet Curtain Connection
Daniels	Fred	SFIA

Drew	Alyssa	TAFE Tasmania
Hampton	Steve	Curtain Man
Harford	Barbara	Manor Blinds & Curtaining
Hughes	Christine	TAFE Tas
Kennedy	Denise	Curtain Elegance
Knight	Bob	Knight's Quality Window Fashions
Major	Ruth	R&R Curtains & Quilting
Matthews	Eva	Brisbane Institute of TAFE
Milner	Russell	Curtains & Blinds
Nicclair	Brad	Soft Furnishing Industry Ass of WA
Overton	Philip	ZAB Window Fashions
Roach	Murray	Murray's Wallpaper & Curtin Gallery
Smythe	Bridgitte	Interior Design by Bridgitte Smythe
Stalker	Bob	Cardell Manufacturing
Streets	Gary	Factory Blinds
Stubbs	Lucille	Winflo Curtains
Tacey	Andrew	Curtain Wonderland
Turnley	Chris	Custom Curtains
Walsh	Jim	TAFE Tasmania
Williams	Kate	From Rags to Swags
Wilson	Josie	Light Manufacturing ITC

Upholstery

Surname	Preferred Name	Organisation
Allen	Greg & Lyn	JF Allen & Co P/L
Andrae	Steven	Sassi Designs
Arnold	Andrew	Cape Country Upholstery

Balleggi	David	Furniture Inspirations
Bernadini	Bruno	West Coast College of TAFE - Balga Campus
Brandes	Peter	Peter Brandes Upholstery
Clifford	John	John Clifford Upholstery
Coleman	Martin	Contour Furniture
Cook	Ian	Alexander J Cook
Courtney	Gary	Cleveland Upholstery
Cuthbertson	Wayne	Tasma Upholsterers
Davis	Wayne	Just Leather
Ellis	Richard	Richard Ellis Furniture Design & Upholsterers
Ewert	Max	Maxwells Upholstery
Garnham	Michael	Jardan Australia
Gillard	Bradley	IDF Interior Design & Furn
Hill	John	Hymark Durniture
Hinton	John	Rawlings Upholstery
Jordan	Charles	Charles Jordan Upholstery
Kelly	Mark	FTV
Kossenas	Andrew	IMP Concepts
Leigh	Phil	Carleton Custom Upholstery
Lockett	Denis & Michael	Tamar Valley Upholstery
Mathieson	Tom	Brisbane Institute of TAFE
McAuliffe	Ted	Eaststyle Furniture
McCormack	Gary	West Coast College of TAFE - Balga Campus
McDonald	Barry	Jon Barrie Furniture

McMahon	Molly	Molmic Furniture
Menna	Tony	Lounge Innovations
Millard	Gary	Moran Aust
Moore	Darryl	Croydon
Morrison	Grant	Acme Fine Furniture
Murray	Gerard	FIAA Queensland
Parker	Frank	Argyle Furniture Designs
Postma	Geoff	TopForm Furniture
Rattray	Rob	TAFE Tasmania
Raynor	Steve	Steve Raynor Upholstery
Reid	John	Workplace Training Pty Ltd
Reinhardt	Paul	Janda Furniture
Sayers	Terese	Laverne Trading Co Pty Ltd
Scalisi	Vince	Scalisi Fine Upholstery
Shah	Yogesh	Focus Designs
Smart	Noel	Queanbeyan
Speer	Judy	Tas LMITAB Inc
Teunissen	Jeff	Motion Chair Company
Ware	Cory	Dunlop Flexible Foams
Warwick	Barry	Pegar Furniture
Williams	Raymond	Parry & Williams

Furnishing Technology

Surname	Preferred Name	Organisation
Amann	Gordon	TAFE North Coast NSW
Ashley	Phillip	TAFE Holmesglen
Bassett	Phillip	TAFE Sydney Institute

Cook	Ian	Alexander J Cook
Court	Gil	NT Major Industries TAC
Dobric	Alex	North Melbourne Institute
Drage	Arthur	West Coast College of TAFE
Dunbar	Chris	TAFE Douglas Mawson
Emerson	Bill	Victoria University
Esterman	Joe	TAFE Bunbury
Forbes	Keith	Chisholm Institute
Gosatti	Carlo	Inglewood Products
Hampton	Simon	Wodonga Institute
Harris	Bernadette	Harris Bromley Pty Ltd
Langworthy	Brian	TAFE Box Hill
Midwood	Peter	Chisholm Institute
Milne	Alex	Illaring Pty Ltd
Norlin	Kerry	TAFE SEMC
Pratt	Julian	RMIT
Presslor	Bill	Holmesglen Institute
Pringle	Philip	Kangan-Batman Institute
Rattray	Rob	TAFE, Launceston
Scott	Ron	Chair FIAA/FITC NSW
Smythe	Terry	Box Hill Institute of TAFE
Stanley	Bryon	RMIT Furntag
Thorn	Russell	Goulburn Ovens Institute
Tittensor	Martin	Wodonga Institute
Weekes	Stephen	TAFE Noarlunga
Wood	Keith	Douglas Mawson Institute (SA)

Appendix B: Version 2

Consultation

Blinds and Awnings Advisory Committee

Surname	Preferred Name	Organisation
Spiteri	Charles	
Broom	Mark	DABSCO
Lewis	Mark	Del-Ray Canvas
Reid	John	Workplace Training Pty Ltd
Graham	John	Tudor House Pty Ltd
Hartland	Peter	Hartland's Blinds
Hughes	Evan	Blind Wholesalers Australia
Green	Mike	Shade Creations
Streets	Gary	Factory Blinds

Coopering National Advisory Group

Surname	Preferred Name	Organisation
Hangartner	Bruno	Margaret River WA
Schahinger	Charles	Schahingers Cooperage SA
Graham	Hanlon	Tasmania
Redden	Darren	Seven Oaks Cooperage Vic
Presti	Neil	Heritage Coopers Vic
Janssen	Gary	Spindels and Staves NSW
Schmeider	David	Schmeider Cooperage Qld

Stained Glass And Lead Lighting National Advisory Group

Surname	Preferred Name	Organisation
Barnard	Jan	Albion Glass QLD

Fisher	Peter	South Sydney Institute NSW
Coleman	Liz	Holmesglen TAFE Vic
Young	Graham	Tudor Rose Glass TAS
Graham	John	Tudor House WA
Frith	Ian	WA Art Glass Guild WA
Unrepresented		SA, NT & ACT

Security Screens & Grills National Advisory Group

Surname	Preferred Name	Organisation
Siwek	Michael	Vincent Security QLD
Redhead	John	Direct Home Products NSW
Brennan	Bernie	Man-U-Fact ACT
Hyland	Viv	Multi Fit VIC
Anderson	Graham	Southern Screen Scene SA
Broom	Mark	DABSCO NT
Unrepresented		TAS

Musical Instrument Making And Repair National Advisory Group

Surname	Preferred Name	Organisation
RAULIN	Rene	Rene Raulin Instrument Maker West Australia
ROCCISANO	Dante	Adelaide Violin Gallery South Australia
AKERMAN	John	John Ackerman Violin Maker Tasmania
NOYCE	Ian	Noyce Guitars Victoria
Not represented		Australian Capital Territory
TYRRELL	Ken	Australian Association of Musical Instrument Making New South Wales
EATON	Doug	Stanley River Music & Australian Association of Musical Instrument Making Queensland

Not represented		Northern Territory
OCHOTECO	Gabriel	Gabriel's Guitar Workshop Queensland
HARVEY	Ian	Australian Music Association Victoria

National Flooring Industry Training Advisory Group

Surname	Preferred Name	Organisation
Jenkins	Michael	Armstrong International
Bellaver	Morrie	Department of Employment and Training, Queensland
Agrefta	Domenic	Canberra Floor Craft
Tovey	Bill	Carpet Court - National
Tree	Bill	ISC (NSW)
Lewis	Martin	FIAA NSW Training Services
Lowe	Chris	Lomac Commercial Flooring NSW
Carter	Jason	Floor Covering Association, NSW
Flierman	Randy	National Timber Flooring
Speerin	Neil	Varie Coat Australasia P/L
Seccombe	Bruce	Floor Vision Queensland
Sutton	Mark	Australian Carpet and Carpet Tile Co
Plunkett	Greg	The Carpet Company Hobart
White	John	Floor Covering Association, Vic
Budge	Stuart	Timber Flooring Association Victoria
Gavaghan	Patrick	TIA Business Services Victoria
Van Elswyk	Fred	WA Floor Covering Assn
Cooper	Bob	BCA Training & Development

Piano Technology Reference Group

Surname	Preferred Name	Organisation
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Bailey	Gary	Piano Magic
Beeson	Bernard	In Tune Piano Service
Bennett	Owen	
Bolsius	Mark	Bolsius Piano Services Pty Ltd
Burch	Brian	Brian Burch Pianos
Clark	Peter	Snadens
Cooper	Kerry	Brisbane Pianos
Dalton	Warwick	
Furness	Anthony	
Harvey	Graeme	
Hawkes	Eric	Restored Pianos
Jenkin	David	Jenkin Piano Service Ltd
Kinney	David	Blue Mountains Piano Services
Lawson	David	
Letchford	Kim	K & A Letchford
McGowan	Graeme	
Ottley	Brent	
Pollard	Geoffrey	Sydney Conservatorium of Music
Quigley	Greg	Jazzworks
Ryan	Michael	
Smith	Geoff	KGP Smith Piano Tuning
Stevens	Robin	
Tunzi	Paul	
Van Uden	Rob	Van Uden's Piano Services
Vine	Bill	Piano Services Australia
Wilkins	Ron	Ronlyn Piano Services

Kelly	Mark	State ITAB Representatives
Keddie	Julie	
Tree	Bill	
Taylor	Bob	
Court	Gil	
Curry	Ian	
Doherty	Debra	
Dielesen	Jillian	
Cunningham	Jack	

Appendix C: Version 3

Project management

The project was managed by Manufacturing Skills Australia and overseen by two Technical Advisory Groups made up of major stakeholders and technical experts. The TAG terms of reference were to:

- oversee and advise on consultation processes
- provide advice on underpinning knowledge and technical content
- act as a technical advisory group in the development of new units of competency
- assist with the resolution of any issues.

The TAG members are listed below.

Furniture Design and Technology

Name	Organisation	State/Territory	Representing
Rod McLean	Independent Designer	Vic	Industry
Bryon Stanley	RMIT	Vic	RTO
Carlo Gossati	Inglewood Products	WA	Industry
Allan Trevaskis	Forest Heritage Centre	WA	Industry
Sam Di Mauro	Griffith University	Qld	RTO
Marc Harrison	Antworks	Qld	Industry
Richard Coker	University of SA	SA	RTO
Jan Coker	University of SA	SA	RTO

Martin Tomasoni	TAFE NSW	NSW	RTO
Chris Francis	Francis Furniture	NSW	Industry
Ian Wykes	TAFE NSW	NSW	RTO
Evan Dunstone	Dunstone Design	ACT	Industry
Dan White	Axiom	Tas	Industry
Noel Tomes	Noel Tomes Design	NT	Industry
Scott Mitchell	Scott Mitchell Design	ACT	Industry
Pam Erasmus	Aust School of Fine Furniture	Tas	RTO
Gordon Amann	TAFE NSW	NSW	RTO
Mark Kelly	VFITB	Vic	ITAB

Interior Decoration and Design

Name	Organisation	State/Territory	Representing
Debra Horgan	TAFE SA	SA	RTO
Chris Klimek	Canberra Institute of Technology	ACT	RTO
Alex Milne	Design First	Qld	Industry
Lindsay Saleeba	Lindsay Saleeba Interiors	WA	Industry
Carol Smith	Glenn Smith and Associates	Tas	Industry
Norma Swanepoel	Maie Douglas Interiors	NSW	Industry
Charles Boubis	Soft Furnishing Association of Aust	Vic	Industry
Elizabeth Nash	Crichton Interiors	Vic	Industry
Victoria Versteeg	RMIT	Vic	RTO
Elaine Roberts	Commercial Arts Training College	Qld	RTO
Noel Tomes	Noel Tomes Design	NT	Industry
Mark Kelly	VFITB	Vic	ITAB

Randy Flierman	BCA	Qld	Support consultant
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Consultation and validation processes

Consultations were undertaken nationally, involving face to face meetings, targeted email distribution of drafts to stakeholders (including industry associations, unions, RTOs, State/Territory ITBs, STAs and individual enterprises) and wider distribution via the MSA website and the MSkills email update. Individual consultations were also conducted to confirm content and approach.

Many people made time in their busy schedule to participate in this project. Without their expertise and input, the project would not have been able to achieve its objectives and this is gratefully acknowledged.

Furniture Design and Technology – consultation list

Development of the Furniture Design and Technology qualifications and associated units of competency involved substantial industry and RTO contributions. This included input from the following people.

Bryon Stanley	RMIT School of Design, Vic
Henry Johnson	Forestworks, Vic
Alexandra Mannell	Holmesglen Training & Development, Vic
Philip Ashley	Furnishing Industry Training Centre, Holmesglen TAFE Vic
Greg Miller Allan Trevaskis	Forest Heritage Centre, Australian School of Fine Wood, Dwellingup, WA
Gordon Amman	North Coast Institute, Coffs Harbour, NSW
Martin Tomasini	North Coast Institute, Coffs Harbour, NSW
Tom Harrington	Sturt School for Wood, NSW
Simon Archer	Australian School of Fine Furniture. Launceston, Tas
Ian Wykes	Hunter TAFE, NSW
Mark Kelly	FIAA, FISDAC, Vic
Patricia Hughes	Candlewood Furniture, Vic
Rex Carr	Wentworth Furniture
Mike Nicholls	Schiavello (Vic) Pty Ltd
Carlo Gosatti	Inglewood Joinery, WA

Stuart Faulkner	Lidcombe TAFE NSW
Anne Johnson	SkillsTech Institute, Qld
Martin Lewis	Furnishing Industry Association of Australia Ltd
Rod McLean	Independent Designer, Vic
Sam Di Mauro	Griffith University, Qld
Marc Harrison	Antworks, Qld
Richard Coker	University of SA
Jan Coker	University of SA
Chris Francis	Francis Furniture, NSW
Evan Dunstone	Dunstone Design, ACT
Dan White	Axiom, Tasmania
Noel Tomes	Noel Tomes Design, NT
Scott Mitchell	Scott Mitchell Design, ACT
Pam Erasmus	Aust School of Fine Furniture, Tas

Interior Design and Decoration – consultation list

Development of the Interior Design and Decoration qualifications and associated units of competency involved substantial contributions from a range of people. Enrolments in this area are predominantly full time students who are school leavers or people undergoing career change. As such, consultation involved strong input from RTOs. This included input from the following people.

Todd Packer	TAFE NSW School of Design
Tracey Sernack-Chee Quee	TAFE NSW
Kathy Marshall	Lidcombe campus
Annalise Morrow	TAFE NSW
Debra Horgan	TAFE SA
Susan Hodge	TAFE SA
Anne Gilleade	TAFE SA
Victoria Versteeg	RMIT - School of Design (TAFE) Design & Social

	Context Portfolio
Bindhu George	Senior Educator-Teaching and Learning Centre for Media, Design & Arts Box Hill Institute
Jan Hagston	CMM RMIT
Jillian Dielesen	Light Manufacturing ITC (WA) Inc
Diana Purcell	Manager Product & Delivery Support Central TAFE
Christine Hughes	TAFE Tasmania
Sharon French	TAFE Tasmania
Anne Johnston	TAFE QLD, SkillsTech Institute
Alex Milne	Kitchen Bathroom Design Institute
David Gooding	TAFE QLD
Angela Jackson Reg Little	TAFE QLD
Liza Farrer-Smith	TAFE Qld, Ithica campus Brisbane Nth
Robyn Jones	QLD TAFE Open Learning Institute
Lindsay Saleeba	Central TAFE Perth
Michelle Brady	WA Department of Education and Training
Carol Smith	TAFE Tasmania
Norma Swanepoel	Sydney
Noel Tomes	
Julie Keddie	QMI
Vanessa Eisenberg	Whitehouse Institute Pty Ltd
David Robertson	National President Design Institute of Australia
Monica Preston	Holmesglen TAFE Vic

Eric Tagliarelli	Holmesglen TAFE
Cathy Jameson	Director Geyer (Interior Designer) Level 7/ 24 York Street, Sydney (Vice president of DIA Sydney)
Ann Gillis	Queensland Interior Design Association
Maree O'Shea	DET QLD
Anne Hannan	CMM Design, Arts Sport & Recreation Swinbourne
Gail Beadman	Mardaw Interiors
Kathy Misso	Interior Decorator (IIDDA)
Pam Humeniuk	Hoskin & Co Interior Integration
Judy Routley	Routleys Plumbing Innovations Pty Ltd
Simon Petrov	JAG Kitchens
Matt Rungie	Crowhurst Decorating Centre
Paul Mabarrack	Mabarrack Furniture
Lyndall Garland	Laminex Group – Commercial Rep
Debra Ellis	Mokum Fabrics – State Manager
Aaron Applefield	Bretts Architectural Centre fittings and fixtures
Raymond Bartell	Andersens Carpets Rothwell Store –Owner
Cate Williams	A Better Image Upholstery, Window Treatments and Interior Decoration)

Appendix D: Version 4

Project background

The development of new components for the kitchen and bathroom sector was identified as an industry Training Package requirement within MSA's Continuous Improvement Plan for 2008-2009.

The Kitchens and Bathrooms Project commenced in March 2008 and aimed to identify and target the skill needs of this industry sector through an extension of coverage of the Furnishing Training Package LMF02. It was initiated in response to both industry requests and MSA response to the growth of this sector in Australia. MSA appointed Richard Jenkins & Associates as the consultant for the project.

The project required an examination of the currently endorsed Certificate II in Furniture Making and Certificate III in Furniture Making (Cabinet Making) to determine to what extent these qualifications accommodated the needs of the kitchen and bathroom sector and what new developments were necessary. The project found that these two qualifications had a predominantly free standing furniture focus and yet (especially in the case of the Certificate III in Furniture Making), the majority of students according to RTO consultations were coming from the kitchen and bathroom installation and renovation sector.

It should be noted that as the focus of this project was on developing qualifications and units of competency for the kitchen and bathroom industry, there was only minimal consultation with the free standing furniture sector. The consultations that did occur focused on reassuring furniture industry and RTO representatives that the needs of furniture manufacturing would continue to be met by MSA and that a review of their needs would occur in the MSA Furniture Training Package Redevelopment Project which was scheduled to commence in 2009. The final outcomes of the Kitchen and Bathroom project have maintained the currently endorsed qualification packaging requirements and options and units of competency for free standing furniture users.

Project management

The project was overseen by an MSA Board Sub-committee made up of major stakeholders and technical experts. The terms of reference were to:

- oversee and advise on consultation processes
- provide advice on underpinning knowledge and technical content
- act as a technical advisory group in the development of new units of competency
- assist with the resolution of any issues.

The individuals and enterprises/organisations represented on the MSA Board Sub-committee are set out in the following table:

Name	Enterprise/Organisation
David Hoare	(Chair)
Alex Milne	Kitchen and Bathroom Design Institute of Australia
Martin Lewis	Furnishing Industry Association of Australia Ltd
Michael O'Connor	CFMEU

Richard Brooks	Cabinetmakers Association of Victoria
Laurie Kruize	HIA Training Manager National Office
Erik Salonen	Manufacturing Skills Queensland

Consultation and validation processes

This project was conducted in two stages. An initial investigation stage was conducted to examine current research and Training Package components, conduct interviews with industry organisations including relevant employer organisations and unions, major companies, RTOs, and State Training Authorities, and develop and validate a project methodology and key recommendations. This was followed by an implementation stage involving widespread consultation and industry visits, development and validation of two drafts and preparation of a final draft for endorsement.

Consultations were undertaken nationally and involved face to face meetings and targeted email distribution of drafts to industry associations, unions, RTOs, State/Territory ITABs, STAs and individual enterprises. Wider distribution was achieved via the MSA website and their regular email newsletter.

Following each period of public comment, amendments were made and drafts circulated for acceptance. Final drafts were developed and circulated to the Kitchens and Bathrooms MSA Board Sub-Committee members for comment and acceptance.

The following people were involved in the development process and the value of their expertise and input is gratefully acknowledged.

Name	Organisation
Sharmily Mukherjee	ForestWorks (NSW)
Eric Salonen and Richard Lindner	Manufacturing Skills QLD
Derek Cupp	Manufacturing Industry Skills Advisory Council (SA)
Jillian Dielesen	Light Manufacturing ITC (WA)
Archie Wright	MITAC (NT)
Patricia Hughes and Henry Johnson	ForestWorks (Victoria)
Deb Doherty	Skills Tasmania
Murray Warren and Garry Michels	Swan TAFE (WA)
David Scannell	Holmesglen TAFE (Victoria)
Anne Johnston, Brad Seeds and Stuart Greenwood	Skills Tech Australia (QLD)

Name	Organisation
Anne Gilleade	DFEEST (SA)
Glenn Williamson	MECAT TAFE NSW
Warren Peters and Rob Watson	South Western Sydney Institute of TAFE
Tracey Sernack-Chee Quee	TAFE NSW
Ian Wykes	Hunter Institute of Technology (NSW)
Peter De Deckker, Jayne Miller, Angus Watson and Mirsad Ramic	Canberra Institute of Technology
Chris Dunbar	Marlston TAFE (SA)
Ian Roberts	NMIT (Victoria)
Bryon Stanley	RMIT (Victoria)
Terry Powell, Neville Mathewson, Greig Price and Rob Rattray	TAFE Tasmania
Alex Milne	National Kitchen and Bathroom Design Institute
Joanne Cys	Design Institute of Australia
Dianne Sebbens, Mike Harding, Laurie Kruize and Simon Tennent	HIA National Office
David Noakes	Blum Australia Pty. Ltd. (NSW)
Leo Skourdombis	CFMEU
Martin Lewis	FIAA Ltd.
Rob Cole	FIAA (ACT)
Barbara Fernandez	NSW Office of Fair Trading
Greg Miles	Marguis Bathroom Products (NSW)
Paul Lawrence	Master Builders Association NSW
Jayne Barstow	Claytons Group (Victoria)
Richard Brooks	Cabinetmakers Association of Victoria

Name	Organisation
John Osmalek	FIAA Vic/Tas
Peter Brilliant and Vicki Samargis	Building Commission of Victoria
Peter Gill	Peter Gill Kitchen and Bathroom Design
Clinton Buckwell	Individual Design & Construction (Victoria)
Anne Astorino	SAVVYspaces (Victoria)
Joe Stillitano	International Cabinets (WA)
Tony Caccamo	Western Cabinets (WA)
Ian Hearn	FIAA (WA)
Wayne Marshal	HIA (WA)
Alan Bosveld	Coastline Kitchens (WA)
Eric Lytton	Cabinetmakers Association of WA
Gavin Butler	Butler Interiors (WA)
Martin Videon	FIAA (SA)
Sharon Burton and Chris Boyle	Qld Building Services Authority
Wayne Havenaar	Germancraft Cabinets (QLD)
Kim Duffin	Sublime (QLD)
Elvio DiZane	Barry's The Home Improvers (QLD)
Randall Morrison	Bathrooms are Us (QLD)
Lee Hardcastle	Enigma Interiors (QLD)
Henry Van Roden	All Bathroom Gear (QLD)
Dominic Snow	Boutique Kitchens (QLD)
Alisa Pasquariello	Mint Kitchens (ACT)
Robert Kusetic	Organised interiors (ACT)
Shaun Haywood	Monaro Timber (ACT)

Name	Organisation
Shaun Kenny	Leader Joinery (ACT)
Craig Redburn Shaun Rickard Candice Reid	The Kitchen Boss (Tasmania)
Brian and Ross Merritt	Merritt & Fair Pty Ltd (Tasmania)
Richard Simpson	Northern Kitchens (Tasmania)
Paul Hollingsworth	Launceston Kitchen Centre (Tasmania)
Dale Hodgeman	Hodgman Kitchen & Cabinets (Tasmania)
John Heys Colin Mulder	Tas Wood Joinery (Tasmania)
Michael Nieuwhof	Toledo Furniture (Tasmania)
Serena Rosevear Lynden Prince	TopNotch Kitchens (Tasmania)
Jamie Roach	Jamie Roach Joinery (Tasmania)
Joe O'Byrne	Fairbrother Pty Ltd (Tasmania)
Vanessa Sahyoun	Marquardt Kitchen Factory (NSW)
Anthony Fulton	Kitchen Concepts (NT)
Michael Dickinson	Fusion Joinery (NT)
Shaun Kenny Leader Joinery ACT; Tony Caccamo Western Cabinets Perth; Simon Ottway KAM Joinery Hobart; Nick O'Brien O'Brien Joinery Tasmania; Russell and Paula Kelly Artizan Cabinets Nth QLD; Michael Rigby Select Kitchens Melbourne; David Jahnsen Janz Designs Sydney; Sean Yoemans Kitchens for Living Newcastle; Greg Woodroffe Germancraft Cabinets Gold Coast; Kim Duffin Sublime Cabinet Design Brisbane; Lee Hardcastle Enigma Interiors Queensland; Kent	HIA Kitchens and Bathrooms Industry reference Group

Name	Organisation
Hopkins HIA Adelaide (representing SA)	

The final drafts of the new units and qualifications for materials submitted for endorsement were validated and signed off by all major stakeholders (both industry and RTOs) with no outstanding or unresolved issues. Validation and acceptance of final drafts was undertaken by email.

Clear and full support for endorsement of the additional components for the LMF02 Training Package has been provided by all stakeholders.

Appendix E: Version 5

Project background

The new components presented for endorsement have been developed and validated extensively with industry and RTO representatives. While there was early and significant support for the units, longer consultations were needed to develop a qualification packaging arrangement that reflected the variety of design tasks undertaken by kitchen and bathroom designers. The consultation process included cabinet makers, kitchen and bathroom manufacturers, installers, designers, unions, licensing bodies, RTOs and industry associations from around Australia.

Project management

The project was overseen by a MSA Board Sub-Committee made up of major stakeholders and technical experts. The terms of reference were to:

- oversee and advise on consultation processes
- provide advice on underpinning knowledge and technical content
- act as a technical advisory group in the development of new units of competency
- assist with the resolution of any issues.

The individuals and enterprises/organisations represented on the MSA Board Sub-Committee are set out in the following table:

Name	Enterprise/Organisation
David Hoare	(Chair)
Alex Milne	Kitchen and Bathroom Design Institute of Australia
Martin Lewis	Furnishing Industry Association of Australia Ltd
Michael O'Connor	CFMEU
Richard Brooks	Cabinetmakers Association of Victoria
Laurie Kruize	HIA Training Manager National Office
Erik Salonen	Manufacturing Skills Queensland

Consultation and validation processes

This project was conducted in two stages. The first stage was conducted as part of the MSA Kitchens and Bathrooms project and included initial investigations to examine current research and Training Package components, conduct of interviews with industry organisations including relevant employer organisations and unions, major companies, RTOs, and State and Territory Training Authorities (STAs), and development and validation of units of competency. This was followed by a second stage involving further consultations to finalise qualification packaging. This stage involved additional industry visits, a survey development of two draft proposals and preparation of a final draft of a Certificate IV qualification for endorsement.

All consultations were undertaken nationally and involved face to face meetings and targeted email distribution of drafts to industry associations, unions, RTOs, State/Territory ITABs, STAs and individual enterprises. Wider distribution was achieved via the MSA website and their regular email newsletter.

Following each period of public comment, amendments were made and drafts circulated for acceptance. Final drafts were developed and circulated to the Kitchens and Bathrooms MSA Board Sub-Committee members for comment and acceptance.

The following people were involved in the development process and the value of their expertise and input is gratefully acknowledged.

Name	Organisation
Sharmily Mukherjee	ForestWorks (NSW)
Eric Salonen and Richard Lindner	Manufacturing Skills QLD
Derek Cupp	Manufacturing Industry Skills Advisory Council (SA)
Jillian Dielesen	Light Manufacturing ITC (WA)
Archie Wright	MITAC (NT)
Patricia Hughes and Henry Johnson	ForestWorks (Victoria)
Deb Doherty	Skills Tasmania
Murray Warren and Garry Michels	Swan TAFE (WA)
David Scannell	Holmesglen TAFE (Victoria)
Anne Johnston, Brad Seeds and Stuart Greenwood	Skills Tech Australia (QLD)
Anne Gilleade	DFEEST (SA)
Glenn Williamson	MECAT TAFE NSW
Warren Peters and Rob Watson	South Western Sydney Institute of TAFE

Name	Organisation
Tracey Sernack-Chee Quee	TAFE NSW
Ian Wykes	Hunter Institute of Technology (NSW)
Peter De Deckker, Jayne Miller, Angus Watson and Mirsad Ramic	Canberra Institute of Technology
Chris Dunbar	Marlston TAFE (SA)
Ian Roberts	NMIT (Victoria)
Bryon Stanley	RMIT (Victoria)
Terry Powell, Neville Mathewson, Greig Price and Rob Rattray	TAFE Tasmania
Alex Milne	National Kitchen and Bathroom Design Institute
Joanne Cys	Design Institute of Australia
Dianne Sebbens, Mike Harding, Laurie Kruize and Simon Tennent	HIA National Office
David Noakes	Blum Australia Pty. Ltd. (NSW)
Leo Skourdoubis	CFMEU
Martin Lewis	FIAA Ltd.
Rob Cole	FIAA (ACT)
Barbara Fernandez	NSW Office of Fair Trading
Greg Miles	Marguis Bathroom Products (NSW)
Paul Lawrence	Master Builders Association NSW
Jayne Barstow	Claytons Group (Victoria)
Richard Brooks	Cabinetmakers Association of Victoria
John Osmalek	FIAA Vic/Tas
Peter Brilliant and Vicki Samargis	Building Commission of Victoria
Peter Gill	Peter Gill Kitchen and Bathroom Design

Name	Organisation
Clinton Buckwell	Individual Design & Construction (Victoria)
Anne Astorino	SAVVYspaces (Victoria)
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Tony Caccamo	Western Cabinets (WA)
Ian Hearn	FIAA (WA)
Wayne Marshal	HIA (WA)
Alan Bosveld	Coastline Kitchens (WA)
Eric Lytton	Cabinetmakers Association of WA
Gavin Butler	Butler Interiors (WA)
Martin Videon	FIAA (SA)
Sharon Burton and Chris Boyle	Qld Building Services Authority
Wayne Havenaar	Germancraft Cabinets (QLD)
Kim Duffin	Sublime (QLD)
Elvio DiZane	Barry's The Home Improvers (QLD)
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Lee Hardcastle	Enigma Interiors (QLD)
Henry Van Roden	All Bathroom Gear (QLD)
Dominic Snow	Boutique Kitchens (QLD)
Alisa Pasquariello	Mint Kitchens (ACT)
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Shaun Haywood	Monaro Timber (ACT)
Shaun Kenny	Leader Joinery (ACT)
Craig Redburn Shaun Rickard Candice Reid	The Kitchen Boss (Tasmania)

Name	Organisation
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Richard Simpson	Northern Kitchens (Tasmania)
Paul Hollingsworth	Launceston Kitchen Centre (Tasmania)
Dale Hodgeman	Hodgman Kitchen & Cabinets (Tasmania)
John Heys Colin Mulder	Tas Wood Joinery (Tasmania)
Michael Nieuwhof	Toledo Furniture (Tasmania)
Serena Rosevear Lynden Prince	TopNotch Kitchens (Tasmania)
Jamie Roach	Jamie Roach Joinery (Tasmania)
Joe O'Byrne	Fairbrother Pty Ltd (Tasmania)
Vanessa Sahyoun	Marquardt Kitchen Factory (NSW)
Anthony Fulton	Kitchen Concepts (NT)
Michael Dickinson	Fusion Joinery (NT)
Shaun Kenny Leader Joinery ACT; Tony Caccamo Western Cabinets Perth; Simon Ottway KAM Joinery Hobart; Nick O'Brien O'Brien Joinery Tasmania; Russell and Paula Kelly Artizan Cabinets Nth QLD; Michael Rigby Select Kitchens Melbourne; David Jahnsen Janz Designs Sydney; Sean Yoemans Kitchens for Living Newcastle; Greg Woodroffe Germancraft Cabinets Gold Coast; Kim Duffin Sublime Cabinet Design Brisbane; Lee Hardcastle Enigma Interiors Queensland; Kent Hopkins HIA Adelaide (representing SA)	HIA Kitchens and Bathrooms Industry reference Group

LMF10108 Certificate I in Furnishing

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform basic furnishing industry tasks used in a range of industry job roles involving given routines and procedures and limited accountability for the quality of outcomes.

Job roles/employment outcomes

The LMF10108 Certificate I in Furnishing reflects vocational outcomes for those performing operational duties in a furnishing enterprise supporting others.

Application

This qualification is typically used to develop skills and knowledge in basic furnishing techniques that may include a variety of employment-related skills including preparatory access and participation skills, broad-based induction skills and/or specific workplace skills. It may also include participation in a team or work group.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include a Certificate II or III Furnishing qualification.

Exemptions applying to Certificate I

The furnishing industry recognises the needs of participants with special training and employment needs, and wishes to support State and Territory equity objectives of facilitating meaningful and recognised vocational training. A special training and employment needs exemption within Certificate I requirements may be granted to those participants by RTOs. This exemption is in respect of core unit *MSAPMOPS101A Make measurements*. The total requirement of six units must still be satisfied by the substitution of a unit from the sector specialist unit inventory.

At the discretion of RTOs, for those already in the picture framing workforce but not yet having qualifications, *LMFPF1001B Frame a simple artwork*, may be replaced for Certificate I purposes by another sector specialist unit.

If Certificate I is being applied in an Interior Design and Decoration context, please note *LMFID1001A Plan the decoration of a simple space* cannot be used as a credit unit for future training.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following Table contains a summary of the employability skills as identified by the furnishing industries for this qualification. This Table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that reflect skill requirements for this level.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • discuss production requirements with a supervisor • use production information such as patterns or specifications to guide work • follow work instructions • ask questions and listen to gain information about processes to be used
Teamwork	<ul style="list-style-type: none"> • work cooperatively with others • use skills of others to assist work activity • observe demonstrations of others
Problem-solving	<ul style="list-style-type: none"> • identify problems with production activities • report hazards • determine requirements in own work to meet quality standards • seek skills and knowledge of supervisors to solve problems
Initiative and enterprise	<ul style="list-style-type: none"> • identify and recommend improvements to own work processes • seek skill development support • monitor and adjust activity in response to progress and outcomes
Planning and organising	<ul style="list-style-type: none"> • recognise hazards and follow appropriate hazard control measures • follow production sequences for a given process or product • identify production and resource requirements • coordinate activity to meet timetables • identify and use relevant personal protective equipment
Self-management	<ul style="list-style-type: none"> • keep the work area clean and tidy at all times • monitor own work to ensure quality standards are achieved • understand own work activities and ask questions if required • apply safety procedures, including the use of protective equipment • follow operation instructions for machines and equipment
Learning	<ul style="list-style-type: none"> • ask questions to expand own understanding of work processes or requirements • demonstrate listening skills

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<ul style="list-style-type: none"> identify own skill requirements and seek skill development access operator manuals to assist own learning
Technology	<ul style="list-style-type: none"> operate machinery, tools and equipment safely and according to operating standards

Packaging Rules**Packaging Rules**

To be awarded the LMF10108 Certificate I in Furnishing, competency must be achieved in **seven (7)** units of competency.

- four (4)** core units of competency
- three (3)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units. No LMF unit aligned initially at Certificate I has prerequisite requirements.

CORE UNITS

Complete all **four (4)** units from this list:

Unit code	Unit title	Prerequisites
MSAPMOHS100A	Follow OHS procedures	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **three (3)** elective units from Groups A, B or C as specified below.

Group A

Select **one (1)** specialist unit from Group A.

Unit code	Unit title	Prerequisites
LMFBA1001A	Construct a basic roll up	

Unit code	Unit title	Prerequisites
	blind	
LMFFF1001B	Complete a basic furniture finishing product	
LMFFL1001A	Complete simple floor covering installation	
LMFFM1001B	Construct a basic timber furnishing product	
LMFFM1002B	Operate basic woodworking machines	
LMFGG1001B	Complete a basic glass and glazing project	
LMFID1001A	Plan the decoration of a simple space	
LMFMB1001B	Construct a basic mattress and base product	
LMFPF1001B	Frame a simple artwork	
LMFSF1001B	Produce basic soft furnishing accessories	
LMFUP1001B	Complete a basic upholstery project	

Group B

Select a minimum of **one (1)** elective unit from the specialist sector units listed below from the same industry sector as the unit chosen from Group A.

Furniture Finishing

Unit code	Unit title	Prerequisites
LMFFF2001B	Use furniture finishing sector hand and power tools	
LMFFF2002B	Dismantle/re-assemble furniture	

Unit code	Unit title	Prerequisites
LMFFF2003B	Remove surface coatings	
LMFFF2004B	Prepare surfaces for finishing	
LMFFF2005B	Maintain spray equipment and booth	
LMFFF2006B	Apply surface coatings by spray gun	
LMFFF2007B	Apply stains, fillers and bleach	
LMFFF2008B	Apply surface coatings by hand	

Furniture Making

Unit code	Unit title	Prerequisites
LMFFM2001B	Use furniture making sector hand and power tools	
LMFFM2002B	Assemble furnishing components	
LMFFM2003B	Select and apply hardware	
LMFFM2004B	Apply sheet laminates by hand	
LMFFM2005B	Join solid timber	
LMFFM2006B	Hand make timber joints	
LMFFM2007B	Follow plans to assemble production furniture	

Unit code	Unit title	Prerequisites
LMFFM2008B	Bend and form cane	
LMFFM2009B	Construct cane furniture	
LMFFM2010B	Set up, operate and maintain basic static machines	
LMFFM2011B	Apply manufactured board conversion techniques	
LMFFM2012B	Set up, operate and maintain pressure and clamping machines	

Coopering (note that an LMFFM unit listed above may be chosen for this sector)

Unit code	Unit title	Prerequisites
LMFCP2001A	Use coopering sector hand and power tools	
LMFCP2002A	Produce barrels using non-fired processes	

Glass and Glazing

Unit code	Unit title	Prerequisites
LMFGG2001B	Use glass and glazing sector hand and power tools	
HLTFA301B	Apply First Aid	
LMFGG2003B	Operate glass freefall rack and	

Unit code	Unit title	Prerequisites
	Table	
LMFGG2004B	Process thin glass by hand	
LMFGG2005B	Move glass sheets by hand	
LMFGG2006B	Move single glass sheets by mechanical means	
LMFGG2007B	Process glass by basic machines	
LMFGG2008B	Glaze/re-glaze residential windows and doors	
LMFGG2009B	Fabricate and assemble metal frames	
LMFGG2010B	Fabricate and install insect and security screens	

Mattress and Base Making

Unit code	Unit title	Prerequisites
LMFMB2001B	Use mattress and base sector hand and power tools	
LMFMB2002B	Prepare and assemble base unit	
LMFMB2003B	Assemble mattress components	
LMFMB2004B	Cut mattress and base fabrics	

Picture Framing

Unit code	Unit title	Prerequisites
LMFPPF2001B	Use picture framing sector hand and power tools	
LMFPPF2002B	Cut mouldings to length	
LMFPPF2003B	Join mouldings	
LMFPPF2004B	Mount artwork	
LMFPPF2005B	Cut mat boards	
LMFPPF2006B	Cut and handle glazing materials for framing	
LMFPPF2007B	Assemble artwork package (basic)	
LMFPPF2008B	Recognise and repair finishes of framing materials	

Soft Furnishings

Unit code	Unit title	Prerequisites
LMFSF2001B	Cut single layer fabrics	
LMFSF2002B	Machine sew materials	
LMFSF2003B	Machine sew using specific techniques	
LMFSF2004B	Hand sew soft furnishings	
LMFSF2005B	Operate a steam press	
LMFSF2006B	Calculate fabric	

Unit code	Unit title	Prerequisites
	quantities for window coverings	
LMFSF2007B	Construct unlined curtains/drapes	
LMFSF2008B	Construct lined curtains/drapes	
LMFSF2009B	Construct padded pelmets	
LMFSF2010B	Make up tracks for window coverings	
LMFSF2011B	Fit and adjust curtain hardware	
LMFSF2012B	Fit and adjust interior blinds	
LMFSF2013B	Dress windows	
LMFSF2014B	Use soft furnishing sector hand and power tools	

Upholstery

Unit code	Unit title	Prerequisites
LMFUP2001B	Use upholstery sector hand and power tools	
LMFUP2002B	Fit upholstery components	
LMFUP2003B	Apply contemporary foundations to upholstered furniture	
LMFUP2004B	Machine sew upholstery final cover materials	

Unit code	Unit title	Prerequisites
	(basic)	
LMFUP2005B	Develop cutting plan and cut single layer upholstery fabric	
LMFUP2006B	Dismantle/re-assemble furniture for upholstering	

Flooring Technology

Unit code	Unit title	Prerequisites
LMFFL2001A	Use flooring technology sector hand and power tools	
LMFFL2002A	Receive and prepare floor covering materials for installation	
LMFFL2003A	Select, operate and maintain floor covering cutting machine	
LMFFL2004A	Moisture test timber and concrete	
LMFFL2101A	Remove existing floor coverings	
LMFFL2102A	Prepare, select and apply smoothing and patching compounds	
LMFFL2103A	Select and apply appropriate compounds and additives	

Unit code	Unit title	Prerequisites
LMFFL2104A	Prepare concrete sub-floors using wet cleaning methods	
LMFFL2105A	Select, prepare and apply moisture barriers and damp proof membranes to concrete sub-floors	
LMFFL2106A	Prepare walls for covering	
LMFFL2107A	Select, operate and maintain grinding equipment	
LMFFL2108A	Select, operate and maintain shot blasting equipment	
LMFFL2109A	Select, operate and maintain demolition equipment	
LMFFL2110A	Select, operate and maintain scarifying equipment	
LMFFL2111A	Coarse sand timber flooring	
LMFFL2112A	Install hard underlays	
LMFFL2201A	Install carpet cushion/underlays and gripper accessories	
LMFFL2202A	Install unpatterned tufted and bonded carpet floor coverings	
LMFFL2203A	Install carpet tiles using standard	

Unit code	Unit title	Prerequisites
	installation procedures	
LMFFL2204A	Install unpatterned tufted and bonded carpet floor coverings to stairs	
LMFFL2301A	Install lay flat vinyl floor coverings	
LMFFL2302A	Install resilient tiles using standard installation procedures	
LMFFL2501A	Install laminate and engineered timber flooring	
LMFFL2502A	Install impact and sound absorption underlay	
LMFFL2503A	Nail strip timber flooring	
LMFFL2504A	Install expansion joints	
LMFFL2505A	Install mouldings and edge trims to timber flooring	

Blinds and Awnings

Unit code	Unit title	Prerequisites
LMFBA2001A	Use blinds and awnings sector hand and power tools	
LMFBA2002A	Set up, operate and maintain blinds and	

Unit code	Unit title	Prerequisites
	awnings sector static machines	
LMFBA2004A	Select and apply blinds and awnings sector hardware and fixings	
LMFBA2005A	Construct roll up and pull down style blinds and awnings	
LMFBA2006A	Construct vertical style blinds	
LMFBA2007A	Construct textiles for canopy-style awnings	
LMFBA2008A	Construct plastic and timber Venetian-style blinds	
LMFBA2009A	Construct aluminium Venetian-style blinds	
LMFBA2010A	Construct metal louvre and canopy hooded style awnings	
LMFBA2011A	Construct aluminium roll up style awnings	

Interior Design & Decoration

Unit code	Unit title	Prerequisites
BSBDES201A	Follow a design process	
BSBDES202A	Evaluate the nature of	

Unit code	Unit title	Prerequisites
	design in a specific industry context	
BSBDES301A	Explore the use of colour	

Group C

A maximum of **one (1)** relevant unit may be chosen from Group C.

Unit code	Unit title	Prerequisites
MSAENV272B	Participate in environmentally sustainable work practices	
<p>One unit may be chosen from units not selected in Group B, units available in this Training Package or from other endorsed Training Packages and accredited courses. The units must be aligned at Certificate I or II level.</p> <p>If a Competitive Manufacturing units is chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.</p>		

A unit selected from another Training Package or accredited course via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

LMF20202 Certificate II in Furniture Finishing

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform a range of finishing techniques for furniture and covers basic dismantling and assembly of furniture items involving known routines and procedures and some accountability for the quality of outcomes.

Job roles/employment outcomes

The LMF20202 Certificate II in Furniture Finishing reflects vocational outcomes for those performing furniture component dismantling and assembly for surface finishing in furniture manufacturing enterprises.

Application

This qualification is typically used to develop skills and knowledge in the finishing of furniture surfaces where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of options to be applied. It could include collaboration with others through members of a group or team.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF10108 Certificate I in Furnishing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF30302 Certificate III in Furniture Making and relevant manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documentation • use communication technologies efficiently • demonstrate effective and appropriate communication and interpersonal skills • interpret and apply workplace procedures and instructions • share workplace information • communicate information about problems with work • read and understand job specifications • communicate information relating to OHS
Teamwork	<ul style="list-style-type: none"> • work independently and as part of a team • provide support to others in the work area • identify performance required to meet customer needs in own work and/or team • identify own role and responsibility within a team
Problem-solving	<ul style="list-style-type: none"> • identify and report any workplace hazards • identify production problems and make contributions to their solution • apply knowledge of materials, product purpose and processes to operations • check machine performance and identify signs of faulty operations • use material and process knowledge to solve problems • monitor workplace activities and identify and report faults or problems • recognise hazards and follow appropriate hazard control measures
Initiative and enterprise	<ul style="list-style-type: none"> • provide feedback on procedures and processes • gather and interpret information • ask questions regarding requirements and expectations • make suggestions for continuous improvement • inspect quality of production on an ongoing basis • record basic information on the quality and other indicators of production performance
Planning and organising	<ul style="list-style-type: none"> • plan work activities • monitor production and work load priorities • select appropriate tools

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • identify requirements for materials, quality and production • direct items to the correct area for further processing • identify and use relevant personal protective equipment • organise work area to maintain housekeeping standards
Self-management	<ul style="list-style-type: none"> • plan to meet own work requirements • keep the work area clean and tidy at all times • conduct regular housekeeping activities • interpret data and information as required by own job • monitor own work • understand own work activities • identify personal responsibilities • accept responsibility for quality of own work • follow OHS practices during the production and manufacturing of products
Learning	<ul style="list-style-type: none"> • assess own competencies in meeting job requirements • listen to feedback and advice of supervisors • identify own skill requirements and seek skill development if required • attend training or skill development activities • ask questions to expand own knowledge
Technology	<ul style="list-style-type: none"> • use appropriate tools, machines and equipment safely and effectively • use machinery to meet productivity requirements • perform minor maintenance on machinery in accordance with workplace practice • use manual handling technologies in the workplace • set up and adjust tools and equipment

Packaging Rules

Packaging Rules

To be awarded the LMF20202 Certificate II in Furniture Finishing, competency must be achieved in **thirteen (13)** units of competency.

- **eight (8)** core units of competency
- **five (5)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **eight (8)** units from this list.

Unit code	Unit title	Prerequisites
LMFFF2001B	Use furniture finishing sector hand and power tools	
LMFFF2003B	Remove surface coatings	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS100A	Follow OHS procedures	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	
TLID307E	Handle dangerous goods/hazardous substances	

ELECTIVE UNITS

Select **five (5)** units from Groups A and B as specified below.

Group A

Select a minimum of **three (3)** units from Group A.

Unit code	Unit title	Prerequisites
LMFFF2002B	Dismantle/reassemble	

Unit code	Unit title	Prerequisites
	furniture	
LMFFF2004B	Prepare surfaces for finishing	
LMFFF2005B	Maintain spray equipment and booth	
LMFFF2006B	Apply surface coatings by spray gun	
LMFFF2007B	Apply stains, fillers and bleach	
LMFFF2008B	Apply surface coatings by hand	

Group B

A maximum of **two (2)** relevant units may be chosen from other units not selected in Group A, or units available in this Training Package, other endorsed Training Packages and accredited courses. The units must be aligned at Certificate II or III level.

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF20309 Certificate II in Furniture Making

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform the manufacture of free-standing furniture or built-in cabinets, and provide on-site assistance in the installation of furniture or cabinets involving known routines and procedures and some accountability for the quality of outcomes.

Job roles/employment outcomes

The LMF20309 Certificate II in Furniture Making reflects vocational outcomes for those performing assistant cabinet maker, assistant installer of built-in cabinets, and production operator within a cabinet making enterprise. Cabinets include free-standing and built-in furniture.

Application

This qualification is typically used to develop skills and knowledge in non trade work involved in the manufacture of furniture or fitted cabinets such as those used in kitchens and bathrooms. Skills are also included that cover assisting in the installation or renovation of kitchens and bathrooms and other fitted cabinets. This qualification does not cover shopfitting.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF10108 Certificate I in Furnishing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF30302 Certificate III in Furniture Making , LMF32109 Certificate III in Cabinet Making and relevant competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documentation • use communication technologies efficiently • demonstrate effective and appropriate communication and interpersonal skills • interpret and apply workplace procedures and instructions • share workplace information • communicate information about problems with work • read and understand job specifications • communicate information relating to occupational health and safety (OHS)
Teamwork	<ul style="list-style-type: none"> • work independently and as part of a team • provide support to others in the work area • identify performance required to meet customer needs in own work and/or team • identify own role and responsibility within a team
Problem-solving	<ul style="list-style-type: none"> • identify and report any workplace hazards • identify production problems and make contributions to their solution • apply knowledge of materials, product purpose and processes to operations • check machine performance and identify signs of faulty operations • use material and process knowledge to solve problems • monitor workplace activities and identify and report faults or problems • recognise hazards and follow appropriate hazard control measures
Initiative and enterprise	<ul style="list-style-type: none"> • provide feedback on procedures and processes • gather and interpret information • ask questions regarding requirements and expectations • make suggestions for continuous improvement • inspect quality of production on an ongoing basis • record basic information on the quality and other indicators of production performance
Planning and organising	<ul style="list-style-type: none"> • plan work activities • monitor production and work load priorities

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • select appropriate tools • identify requirements for materials, quality and production • direct items to the correct area for further processing • identify and use relevant personal protective equipment • organise work area to maintain housekeeping standards
Self-management	<ul style="list-style-type: none"> • plan to meet own work requirements • keep the work area clean and tidy at all times • conduct regular housekeeping activities • interpret data and information as required by own job • monitor own work • understand own work activities • identify personal responsibilities • accept responsibility for quality of own work • follow OHS practices during the production and manufacturing of products
Learning	<ul style="list-style-type: none"> • assess own competencies in meeting job requirements • listen to feedback and advice of supervisors • identify own skill requirements and seek skill development if required • attend training or skill development activities • ask questions to expand own knowledge
Technology	<ul style="list-style-type: none"> • use appropriate tools, machines and equipment safely and effectively • use machinery to meet productivity requirements • perform minor maintenance on machinery in accordance with workplace practice • use manual handling technologies in the workplace • set up and adjust tools and equipment

Packaging Rules

Packaging Rules

To be awarded the LMF20309 Certificate II in Furniture Making, competency must be achieved in **thirteen (13)** units of competency.

- **five (5)** core units of competency
- **eight (8)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **five (5)** units from this list.

Unit code	Unit title	Prerequisites
LMFFM2001B	Use furniture making sector hand and power tools	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **eight (8)** unit from Groups A, B or C as specified below.

Group A

Select at least **one (1)** unit from Group A.

Unit code	Unit title	Prerequisites
CPCCOHS1001A	Work safely in the construction industry	
MSAPMOHS200A	Work safely	

NB Unit CPCCOHS1001A *Work safely in the construction industry* above is necessary to achieve a National Construction Safety Card required for all on-site work access.

Group B

Select a minimum of **four (4)** units from Group B with a maximum of **two (2)** units coded MSACM.

Unit code	Unit title	Prerequisites
LMFFF2004B	Prepare surfaces for finishing	
LMFFF2006B	Apply surface coatings by spray gun	
LMFFM2002B	Assemble furnishing components	
LMFFM2003B	Select and apply hardware	
LMFFM2004B	Apply sheet laminates by hand	
LMFFM2005B	Join solid timber	
LMFFM2006B	Hand make timber joints	
LMFFM2007B	Follow plans to assemble production furniture	
LMFFM2008B	Bend and form cane	
LMFFM2009B	Construct cane furniture	
LMFFM2010B	Set up, operate and maintain basic static machines	
LMFFM2011B	Apply manufactured board conversion techniques	

Unit code	Unit title	Prerequisites
LMFFM2012B	Set up, operate and maintain pressure and clamping machines	
LMFKB2001A	Prepare for cabinet installation	
LMFKB2002A	Provide assistance in cabinet installation	
MEM16008A	Interact with computing technology	
MSACMC210A	Manage the impact of change on own work	
MSACMS200A	Apply competitive manufacturing practices	
MSACMS201A	Sustain process improvements	
MSACMT220A	Apply quick changeover procedures	
MSACMT221A	Apply Just in Time (JIT) procedures	
MSACMT230A	Apply cost factors to work practices	
MSACMT240A	Apply 5S procedures in a manufacturing environment	
MSACMT250A	Monitor process	

Unit code	Unit title	Prerequisites
	capability	
MSACMT251A	Apply quality standards	
MSACMT260A	Use planning software systems in manufacturing	
MSACMT261A	Use SCADA systems in manufacturing	
MSACMT270A	Use sustainable energy practices	
MSACMT271A	Use sustainable environmental practices	
MSACMT280A	Undertake root cause analysis	
MSACMT281A	Contribute to the application of a proactive maintenance strategy	
MSAPMSUP201A	Receive or despatch goods	
MSAPMSUP240A	Undertake minor maintenance	
MSAPMSUP273A	Handle goods	

Group C

Up to **three (3)** relevant units may be chosen from other or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 3 units) or Certificate III level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF20402 Certificate II in Glass and Glazing

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform basic glass and glazing job roles such as safely processing and moving thin glass and may include assembly/repair of stained glass and lead lighting involving known routines and procedures and some accountability for the quality of outcomes.

Job roles/employment outcomes

The LMF20402 Certificate II in Glass and Glazing reflects vocational outcomes for those performing operational glass and glazing functions.

Application

This qualification is typically used to develop skills and knowledge in glass and glazing operations where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of options to be applied. It could include collaboration with others through members of a group or team.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF10108 Certificate I in Furnishing with units included in this qualification or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF30602 Certificate III in Glass and Glazing and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documentation • use communication technologies efficiently • demonstrate effective and appropriate communication and interpersonal skills • interpret and apply workplace procedures and instructions • share workplace information • communicate information about problems with work • read and understand job specifications • communicate information relating to OHS
Teamwork	<ul style="list-style-type: none"> • work independently and as part of a team • provide support to others in the work area • identify performance required to meet customer needs in own work and/or team • identify own role and responsibility within a team
Problem-solving	<ul style="list-style-type: none"> • identify and report any workplace hazards • identify production problems and make contributions to their solution • apply knowledge of materials, product purpose and processes to operations • check machine performance and identify signs of faulty operations • use material and process knowledge to solve problems • monitor workplace activities and identify and report faults or problems • recognise hazards and follow appropriate hazard control measures
Initiative and enterprise	<ul style="list-style-type: none"> • provide feedback on procedures and processes • gather and interpret information • ask questions regarding requirements and expectations • make suggestions for continuous improvement • inspect quality of production on an ongoing basis • record basic information on the quality and other indicators of production performance
Planning and organising	<ul style="list-style-type: none"> • plan work activities • monitor production and work load priorities • select appropriate tools • identify requirements for materials, quality and production • direct items to the correct area for further processing • identify and use relevant personal protective equipment

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> organise work area to maintain housekeeping standards
Self-management	<ul style="list-style-type: none"> plan to meet own work requirements keep the work area clean and tidy at all times conduct regular housekeeping activities interpret data and information as required by own job monitor own work understand own work activities identify personal responsibilities accept responsibility for quality of own work follow OHS practices during the production and manufacturing of products
Learning	<ul style="list-style-type: none"> assess own competencies in meeting job requirements listen to feedback and advice of supervisors identify own skill requirements and seek skill development if required attend training or skill development activities ask questions to expand own knowledge
Technology	<ul style="list-style-type: none"> use appropriate tools, machines and equipment safely and effectively use machinery to meet productivity requirements perform minor maintenance on machinery in accordance with workplace practice use manual handling technologies in the workplace set up and adjust tools and equipment

Packaging Rules

Packaging Rules

To be awarded the LMF20402 Certificate II in Glass and Glazing, competency must be achieved in **thirteen (13)** units of competency.

- five (5)** core units of competency
- eight (8)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Select all **five (5)** units from this list:

Unit code	Unit title	Prerequisites
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS100A	Follow OHS procedures	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **eight (8)** units from Groups A, B and C as specified below.

Group A

Select a minimum of **five (5)** units from Group A

Unit code	Unit title	Prerequisites
HLTFA301B	Apply First Aid	
LMFGG2001B	Use glass and glazing sector hand and power tools	
LMFGG2003B	Operate glass freefall rack and Table	
LMFGG2004B	Process thin glass by hand	
LMFGG2005B	Move glass sheets by hand	
LMFGG2007B	Process glass by basic machines	
LMFGG2008B	Glaze/reglaze residential windows and doors	

Group B

Select a maximum of **three (3)** units from Groups B and C

Unit code	Unit title	Prerequisites
LMFGG2006B	Move single glass sheets by mechanical means	
LMFGG2009B	Fabricate and assemble metal frames	
LMFGG2010B	Fabricate and install insect and security screens	

Group C

Up to **three (3)** relevant units may be chosen from other units not already selected from Groups A and B or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 3 units) or Certificate III level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF20502 Certificate II in Mattress and Base Making

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform basic tasks in the mattress and base making sector involving known routines and procedures and some accountability for the quality of outcomes.

Job roles/employment outcomes

The LMF20502 Certificate II in Mattress and Base Making reflects vocational outcomes for those performing job roles in mattress and bed base making enterprises.

Application

This qualification is typically used to develop skills and knowledge in mattress and base making involving a range of varied activities or knowledge applications where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of options to be applied. It could include collaboration with others through members of a group or team.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF10108 Certificate I in Furnishing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF30702 Certificate III in Mattress and Base Making and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documentation • use communication technologies efficiently • demonstrate effective and appropriate communication and interpersonal skills • interpret and apply workplace procedures and instructions • share workplace information • communicate information about problems with work • read and understand job specifications • communicate information relating to OHS
Teamwork	<ul style="list-style-type: none"> • work independently and as part of a team • provide support to others in the work area • identify performance required to meet customer needs in own work and/or team • identify own role and responsibility within a team
Problem-solving	<ul style="list-style-type: none"> • identify and report any workplace hazards • identify production problems and make contributions to their solution • apply knowledge of materials, product purpose and processes to operations • check machine performance and identify signs of faulty operations • use material and process knowledge to solve problems • monitor workplace activities and identify and report faults or problems • recognise hazards and follow appropriate hazard control measures
Initiative and enterprise	<ul style="list-style-type: none"> • provide feedback on procedures and processes • gather and interpret information • ask questions regarding requirements and expectations • make suggestions for continuous improvement • inspect quality of production on an ongoing basis • record basic information on the quality and other indicators of production performance
Planning and organising	<ul style="list-style-type: none"> • plan work activities • monitor production and work load priorities • select appropriate tools • identify requirements for materials, quality and production • direct items to the correct area for further processing • identify and use relevant personal protective equipment

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> organise work area to maintain housekeeping standards
Self-management	<ul style="list-style-type: none"> plan to meet own work requirements keep the work area clean and tidy at all times conduct regular housekeeping activities interpret data and information as required by own job monitor own work understand own work activities identify personal responsibilities accept responsibility for quality of own work follow OHS practices during the production and manufacturing of products
Learning	<ul style="list-style-type: none"> assess own competencies in meeting job requirements listen to feedback and advice of supervisors identify own skill requirements and seek skill development if required attend training or skill development activities ask questions to expand own knowledge
Technology	<ul style="list-style-type: none"> use appropriate tools, machines and equipment safely and effectively use machinery to meet productivity requirements perform minor maintenance on machinery in accordance with workplace practice use manual handling technologies in the workplace set up and adjust tools and equipment

Packaging Rules

Packaging Rules

To be awarded the LMF20502 Certificate II in Mattress and Base Making, competency must be achieved in **thirteen (13)** units of competency:

- seven (7)** core units of competency
- six (6)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **seven (7)** units from this list.

Unit code	Unit title	Prerequisites
LMFMB2001B	Use mattress and base sector hand and power tools	
LMFMB2003B	Assemble mattress components	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS100A	Follow OHS procedures	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **six (6)** units from Groups A and B as specified below:

Group A

Select a minimum of **one (1)** unit from Group A

Unit code	Unit title	Prerequisites
LMFMB2002B	Prepare and assemble base unit	
LMFMB2004B	Cut mattress and base fabrics	

Group B

Select up to **five (5)** relevant units from the unit not selected in Group A, or units available in this Training Package or other endorsed Training Packages and accredited courses. Units must be aligned at Certificate II or III level.

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF20602 Certificate II in Picture Framing

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform basis tasks in the picture framing sector that could include mounting artwork and glazing frames involving known routines and procedures and some accountability for the quality of outcomes.

Job roles/employment outcomes

The LMF20602 Certificate II in Picture Framing reflects vocational outcomes for those performing picture framing job roles.

Application

This qualification is typically used to develop picture framing skills and knowledge and perform varied activities or knowledge applications where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of options to be applied. It can involve collaboration with others through membership of a group or team.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF10108 Certificate I in Furnishing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF30802 Certificate III in Picture Framing and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documentation • use communication technologies efficiently • demonstrate effective and appropriate communication and interpersonal skills • interpret and apply workplace procedures and instructions • share workplace information • communicate information about problems with work • read and understand job specifications • communicate information relating to OHS
Teamwork	<ul style="list-style-type: none"> • work independently and as part of a team • provide support to others in the work area • identify performance required to meet customer needs in own work and/or team • identify own role and responsibility within a team
Problem-solving	<ul style="list-style-type: none"> • identify and report any workplace hazards • identify production problems and make contributions to their solution • apply knowledge of materials, product purpose and processes to operations • check machine performance and identify signs of faulty operations • use material and process knowledge to solve problems • monitor workplace activities and identify and report faults or problems • recognise hazards and follow appropriate hazard control measures
Initiative and enterprise	<ul style="list-style-type: none"> • provide feedback on procedures and processes • gather and interpret information • ask questions regarding requirements and expectations • make suggestions for continuous improvement • inspect quality of production on an ongoing basis • record basic information on the quality and other indicators of production performance
Planning and organising	<ul style="list-style-type: none"> • plan work activities • monitor production and work load priorities • select appropriate tools • identify requirements for materials, quality and production • direct items to the correct area for further processing • identify and use relevant personal protective equipment

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> organise work area to maintain housekeeping standards
Self-management	<ul style="list-style-type: none"> plan to meet own work requirements keep the work area clean and tidy at all times conduct regular housekeeping activities interpret data and information as required by own job monitor own work understand own work activities identify personal responsibilities accept responsibility for quality of own work follow OHS practices during the production and manufacturing of products
Learning	<ul style="list-style-type: none"> assess own competencies in meeting job requirements listen to feedback and advice of supervisors identify own skill requirements and seek skill development if required attend training or skill development activities ask questions to expand own knowledge
Technology	<ul style="list-style-type: none"> use appropriate tools, machines and equipment safely and effectively use machinery to meet productivity requirements perform minor maintenance on machinery in accordance with workplace practice use manual handling technologies in the workplace set up and adjust tools and equipment

Packaging Rules

Packaging Rules

To be awarded the LMF20602 Certificate II in Picture Framing, competency must be achieved in **thirteen (13)** units of competency:

- seven (7)** core units of competency
- six (6)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **seven (7)** units from this list.

Unit code	Unit title	Prerequisites
LMFPP2001B	Use picture framing sector hand and power tools	
LMFPP2002B	Cut mouldings to length	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS100A	Follow OHS procedures	
MSAPMOPS101A	Make measurements	
MSAPMPSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **six (6)** units from Groups A and B as specified below:

Group A

Select a minimum of **three (3)** units from Group A

Unit code	Unit title	Prerequisites
LMFPP2004B	Mount artwork	
LMFPP2006B	Cut and handle glazing materials for framing	
LMFPP2007B	Assemble artwork package (basic)	
LMFPP2008B	Recognise and	

Unit code	Unit title	Prerequisites
	repair finishes of framing materials	
LMFPPF2003B	Join mouldings	
LMFPPF2005B	Cut mat boards	

Group B

Up to **three (3)** relevant units may be chosen from units not already selected in Group A, or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II or Certificate III level (maximum 2 Certificate III aligned units).

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF20702 Certificate II in Soft Furnishing

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform basic duties in the soft furnishing sector involving known routines and procedures and some accountability for the quality of outcomes.

Job roles/employment outcomes

The LMF20702 Certificate II in Soft Furnishing reflects vocational outcomes for those performing soft furnishing and window covering manufacturing job roles.

Application

This qualification is typically used to develop skills and knowledge in soft furnishing and window covering tasks with varied activities or knowledge applications where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of options to be applied. It includes activities involving individual responsibility or autonomy and/or collaboration with others through members of a group or team.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF10108 Certificate I in Furnishing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF30902 Certificate III in Soft Furnishing and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documentation • use communication technologies efficiently • demonstrate effective and appropriate communication and interpersonal skills • interpret and apply workplace procedures and instructions • share workplace information • communicate information about problems with work • read and understand job specifications • communicate information relating to OHS
Teamwork	<ul style="list-style-type: none"> • work independently and as part of a team • provide support to others in the work area • identify performance required to meet customer needs in own work and/or team • identify own role and responsibility within a team
Problem-solving	<ul style="list-style-type: none"> • identify and report any workplace hazards • identify production problems and make contributions to their solution • apply knowledge of materials, product purpose and processes to operations • check machine performance and identify signs of faulty operations • use material and process knowledge to solve problems • monitor workplace activities and identify and report faults or problems • recognise hazards and follow appropriate hazard control measures
Initiative and enterprise	<ul style="list-style-type: none"> • provide feedback on procedures and processes • gather and interpret information • ask questions regarding requirements and expectations • make suggestions for continuous improvement • inspect quality of production on an ongoing basis • record basic information on the quality and other indicators of production performance
Planning and organising	<ul style="list-style-type: none"> • plan work activities • monitor production and work load priorities • select appropriate tools • identify requirements for materials, quality and production • direct items to the correct area for further processing • identify and use relevant personal protective equipment

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> organise work area to maintain housekeeping standards
Self-management	<ul style="list-style-type: none"> plan to meet own work requirements keep the work area clean and tidy at all times conduct regular housekeeping activities interpret data and information as required by own job monitor own work understand own work activities identify personal responsibilities accept responsibility for quality of own work follow OHS practices during the production and manufacturing of products
Learning	<ul style="list-style-type: none"> assess own competencies in meeting job requirements listen to feedback and advice of supervisors identify own skill requirements and seek skill development if required attend training or skill development activities ask questions to expand own knowledge
Technology	<ul style="list-style-type: none"> use appropriate tools, machines and equipment safely and effectively use machinery to meet productivity requirements perform minor maintenance on machinery in accordance with workplace practice use manual handling technologies in the workplace set up and adjust tools and equipment

Packaging Rules

Packaging Rules

To be awarded the LMF20702 Certificate II in Soft Furnishing, competency must be achieved in **thirteen (13)** units of competency.

- six (6)** core units of competency
- seven (7)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **six (6)** units from this list.

Unit code	Unit title	Prerequisites
LMFSF2014B	Use soft furnishing sector hand and power tools	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS100A	Follow OHS procedures	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **seven (7)** units from Groups A, B and C as specified below.

Group A

Select a minimum of **two (2)** units from Group A.

Unit code	Unit title	Prerequisites
LMFSF2002B	Machine sew materials	
LMFSF2003B	Machine sew using specific techniques	
LMFSF2010B	Make up tracks for window coverings	
LMFSF2011B	Fit and adjust curtain hardware	

Group B

Select at least **one (1)** unit from Group B.

Unit code	Unit title	Prerequisites
LMFSF2001B	Cut single layer fabrics	
LMFSF2004B	Hand sew soft furnishings	
LMFSF2005B	Operate a steam press	
LMFSF2006B	Calculate fabric quantities for window coverings	
LMFSF2007B	Construct unlined curtains/drapes	
LMFSF2008B	Construct lined curtains/drapes	
LMFSF2009B	Construct padded pelmets	
LMFSF2012B	Fit and adjust interior blinds	
LMFSF2013B	Dress windows	

Group C

Up to **four (4)** relevant units may be chosen from other units not already selected from Groups A and B, or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level or Certificate III level (maximum of 2 Certificate III aligned units).

Units selected from other Training Packages and accredited courses via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF20802 Certificate II in Upholstery

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform basic tasks in the upholstery sector involving known routines and procedures and some accountability for the quality of outcomes.

Job roles/employment outcomes

The LMF20802 Certificate II in Upholstery reflects vocational outcomes for those in upholstery job roles that may include dismantling and assembly of upholstery components and sewing and fitting of upholstery fabrics.

Application

This qualification is typically used to develop skills and knowledge in upholstery applications where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of options to be applied. It can involve collaboration with others through members of a group or team.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF10108 Certificate I in Furnishing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF31002 Certificate III in Upholstery and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documentation • use communication technologies efficiently • demonstrate effective and appropriate communication and interpersonal skills • interpret and apply workplace procedures and instructions • share workplace information • communicate information about problems with work • read and understand job specifications • communicate information relating to OHS
Teamwork	<ul style="list-style-type: none"> • work independently and as part of a team • provide support to others in the work area • identify performance required to meet customer needs in own work and/or team • identify own role and responsibility within a team
Problem-solving	<ul style="list-style-type: none"> • identify and report any workplace hazards • identify production problems and make contributions to their solution • apply knowledge of materials, product purpose and processes to operations • check machine performance and identify signs of faulty operations • use material and process knowledge to solve problems • monitor workplace activities and identify and report faults or problems • recognise hazards and follow appropriate hazard control measures
Initiative and enterprise	<ul style="list-style-type: none"> • provide feedback on procedures and processes • gather and interpret information • ask questions regarding requirements and expectations • make suggestions for continuous improvement • inspect quality of production on an ongoing basis • record basic information on the quality and other indicators of production performance
Planning and organising	<ul style="list-style-type: none"> • plan work activities • monitor production and work load priorities • select appropriate tools • identify requirements for materials, quality and production • direct items to the correct area for further processing • identify and use relevant personal protective equipment

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> organise work area to maintain housekeeping standards
Self-management	<ul style="list-style-type: none"> plan to meet own work requirements keep the work area clean and tidy at all times conduct regular housekeeping activities interpret data and information as required by own job monitor own work understand own work activities identify personal responsibilities accept responsibility for quality of own work follow OHS practices during production and manufacturing processes
Learning	<ul style="list-style-type: none"> assess own competencies in meeting job requirements listen to feedback and advice of supervisors identify own skill requirements and seek skill development if required attend training or skill development activities ask questions to expand own knowledge
Technology	<ul style="list-style-type: none"> use appropriate tools, machines and equipment safely and effectively use machinery to meet productivity requirements perform minor maintenance on machinery in accordance with workplace practice use manual handling technologies in the workplace set up and adjust tools and equipment

Packaging Rules

Packaging Rules

To be awarded the LMF20802 Certificate II in Upholstery, competency must be achieved in **fourteen (14)** units of competency:

- seven (7)** core units of competency
- seven (7)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **seven (7)** units from this list.

Unit code	Unit title	Prerequisites
LMFUP2001B	Use upholstery sector hand and power tools	
LMFUP2006B	Dismantle/reassemble furniture for upholstery	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS100A	Follow OHS procedures	
MSAPMOPS101A	Make measurements	
MSAPMPSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **seven (7)** units from Group A and Group B as specified below.

Group A

Select a minimum of **three (3)** units from Group A

Unit code	Unit title	Prerequisites
LMFUP2002B	Fit upholstery components	
LMFUP2003B	Apply contemporary foundations to upholstered furniture	
LMFUP2004B	Machine sew upholstery final cover materials (basic)	

Unit code	Unit title	Prerequisites
LMFUP2005B	Develop cutting plan and cut single layer upholstery fabric	

Group B

Up to **four (4)** relevant units may be chosen from a unit not already selected in Group B, or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level or Certificate III level (maximum 2 Certificate III aligned units).

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF20908 Certificate II in Flooring Technology

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform basic flooring preparation and installation tasks such as timber, carpet and vinyl floor coverings that involve known routines and procedures and some accountability for the quality of outcomes.

Job roles/employment outcomes

The LMF20908 Certificate II in Flooring Technology reflects vocational outcomes for those performing job roles involving handling flooring materials, preparing surfaces and installing a range of floorings.

Application

This qualification is typically used to develop skills and knowledge in preparation of flooring surfaces and installing flooring materials where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of options to be applied. It can involve collaboration with others through members of a group or team.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF10108 Certificate I in Furnishing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF1208 Certificate III in Flooring Technology and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documentation • use communication technologies efficiently • demonstrate effective and appropriate communication and interpersonal skills • interpret and apply workplace procedures and instructions • share workplace information • communicate information about problems with work • read and understand job specifications • communicate information relating to OHS
Teamwork	<ul style="list-style-type: none"> • work independently and as part of a team • provide support to others in the work area • identify performance required to meet customer needs in own work and/or team • identify own role and responsibility within a team
Problem-solving	<ul style="list-style-type: none"> • identify and report any workplace hazards • identify production problems and make contributions to their solution • apply knowledge of materials, product purpose and processes to operations • check machine performance and identify signs of faulty operations • use material and process knowledge to solve problems • monitor workplace activities and identify and report faults or problems • recognise hazards and follow appropriate hazard control measures
Initiative and enterprise	<ul style="list-style-type: none"> • provide feedback on procedures and processes • gather and interpret information • ask questions regarding requirements and expectations • make suggestions for continuous improvement • inspect quality of production on an ongoing basis • record basic information on the quality and other indicators of production performance
Planning and organising	<ul style="list-style-type: none"> • plan work activities • monitor production and work load priorities • select appropriate tools • identify requirements for materials, quality and production • direct items to the correct area for further processing • identify and use relevant personal protective equipment

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> organise work area to maintain housekeeping standards
Self-management	<ul style="list-style-type: none"> plan to meet own work requirements keep the work area clean and tidy at all times conduct regular housekeeping activities interpret data and information as required by own job monitor own work understand own work activities identify personal responsibilities accept responsibility for quality of own work follow OHS practices during production and manufacturing processes
Learning	<ul style="list-style-type: none"> assess own competencies in meeting job requirements listen to feedback and advice of supervisors identify own skill requirements and seek skill development if required attend training or skill development activities ask questions to expand own knowledge
Technology	<ul style="list-style-type: none"> use appropriate tools, machines and equipment safely and effectively use machinery to meet productivity requirements perform minor maintenance on machinery in accordance with workplace practice use manual handling technologies in the workplace set up and adjust tools and equipment

Packaging Rules

Packaging Rules

To be awarded the LMF20908 Certificate II in Flooring Technology, competency must be achieved in **fourteen (14)** units of competency.

- six (6)** core units of competency
- eight (8)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **six (6)** units from this list.

Unit code	Unit title	Prerequisites
LMFFL2001A	Use flooring technology sector hand and power tools	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS100A	Follow OHS procedures	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **eight (8)** units from Groups A and B as specified below.

Group A

Select a minimum of **four (4)** units from Group A.

Unit code	Unit title	Prerequisites
LMFFL2002A	Receive and prepare floor covering materials for installation	
LMFFL2003A	Select, operate and maintain floor covering cutting machine	
LMFFL2004A	Moisture test timber and	

Unit code	Unit title	Prerequisites
	concrete floors	
LMFFL2101A	Remove existing floor coverings	
LMFFL2102A	Prepare, select and apply smoothing and patching compounds	
LMFFL2103A	Select and apply appropriate compounds and additives	
LMFFL2104A	Prepare concrete sub-floors using wet cleaning methods	
LMFFL2105A	Select, prepare and apply moisture barriers and damp proof membranes to concrete sub-floors	
LMFFL2106A	Prepare walls for covering	
LMFFL2107A	Select, operate and maintain grinding equipment	
LMFFL2108A	Select, operate and maintain shot blasting equipment	
LMFFL2109A	Select, operate and maintain demolition equipment	
LMFFL2110A	Select, operate and maintain scarifying equipment	

Unit code	Unit title	Prerequisites
LMFFL2111A	Coarse sand timber flooring	
LMFFL2112A	Install hard underlays	
LMFFL2201A	Install carpet cushion/underlays and gripper accessories	
LMFFL2202A	Install unpatterned tufted and bonded carpet floor coverings	
LMFFL2203A	Install carpet tiles using standard installation procedures	
LMFFL2204A	Install unpatterned tufted and bonded carpet floor coverings to stairs	
LMFFL2301A	Install lay flat vinyl floor coverings	
LMFFL2302A	Install resilient tiles using standard installation procedures	
LMFFL2501A	Install laminate and engineered timber flooring	
LMFFL2502A	Install impact and sound absorption underlay	
LMFFL2503A	Nail strip timber flooring	
LMFFL2504A	Install expansion	

Unit code	Unit title	Prerequisites
	joints	
LMFFL2505A	Install mouldings and edge trims to timber flooring	
LMFFL3101A	Inspect sub-floors	
LMFFL3102A	Prepare, select and apply screed to concrete sub-floors	

Group B

Up to **three (3)** relevant units may be chosen from units not already selected in Group A, or units in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level of Certificate III level (a maximum of 2 Certificate III units)

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF21008 Certificate II in Blinds and Awnings

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform basic tasks in blind and awning manufacture involving known routines and procedures and some accountability for the quality of outcomes.

Job roles/employment outcomes

The LMF21008 Certificate II in Blinds and Awnings reflects vocational outcomes for those performing job roles in construction of a range of blinds and awnings using textiles, timber, plastic, steel and aluminium.

Application

This qualification is typically used to develop skills and knowledge in blind and awning manufacturing processes where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of options to be applied. It could include collaboration with others through members of a group or team.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF10108 Certificate I in Furnishing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF31808 Certificate III in Blinds and Awnings and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documentation • use communication technologies efficiently • demonstrate effective and appropriate communication and interpersonal skills • interpret and apply workplace procedures and instructions • share workplace information • communicate information about problems with work • read and understand job specifications • communicate information relating to OHS
Teamwork	<ul style="list-style-type: none"> • work independently and as part of a team • provide support to others in the work area • identify performance required to meet customer needs in own work and/or team • identify own role and responsibility within a team
Problem-solving	<ul style="list-style-type: none"> • identify and report any workplace hazards • identify production problems and make contributions to their solution • apply knowledge of materials, product purpose and processes to operations • check machine performance and identify signs of faulty operations • use material and process knowledge to solve problems • monitor workplace activities and identify and report faults or problems • recognise hazards and follow appropriate hazard control measures
Initiative and enterprise	<ul style="list-style-type: none"> • provide feedback on procedures and processes • gather and interpret information • ask questions regarding requirements and expectations • make suggestions for continuous improvement • inspect quality of production on an ongoing basis • record basic information on the quality and other indicators of production performance
Planning and organising	<ul style="list-style-type: none"> • plan work activities • monitor production and work load priorities • select appropriate tools • identify requirements for materials, quality and production • direct items to the correct area for further processing • identify and use relevant personal protective equipment

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> organise work area to maintain housekeeping standards
Self-management	<ul style="list-style-type: none"> plan to meet own work requirements keep the work area clean and tidy at all times conduct regular housekeeping activities interpret data and information as required by own job monitor own work understand own work activities identify personal responsibilities accept responsibility for quality of own work follow OHS practices during production and manufacturing processes
Learning	<ul style="list-style-type: none"> assess own competencies in meeting job requirements listen to feedback and advice of supervisors identify own skill requirements and seek skill development if required attend training or skill development activities ask questions to expand own knowledge
Technology	<ul style="list-style-type: none"> use appropriate tools, machines and equipment safely and effectively use machinery to meet productivity requirements perform minor maintenance on machinery in accordance with workplace practice use manual handling technologies in the workplace set up and adjust tools and equipment

Packaging Rules

Packaging Rules

To be awarded the LMF21008 Certificate II in Blinds and Awnings, competency must be achieved in **fourteen (14)** units of competency.

- six (6)** core units of competency
- eight (8)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **six (6)** units from this list.

Unit code	Unit title	Prerequisites
LMFBA2001A	Use blinds and awnings sector hand and power tools	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS100A	Follow OHS procedures	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **eight (8)** units from Groups A, B and C as specified below.

Group A

Select a minimum of **four (4)** units from Group A

Unit code	Unit title	Prerequisites
LMFBA2004A	Select and apply blinds and awnings sector hardware and fixings	
LMFBA2005A	Construct roll up and pull down style blinds and awnings	
LMFGN3001B	Read and interpret	

Unit code	Unit title	Prerequisites
	work documents	
LMFSF2001B	Cut single layer fabrics	
LMFSF2002B	Machine sew materials	

Group B

Select at least **one (1)** and up to **three (3)** units from Group B

Unit code	Unit title	Prerequisites
BSBADM311A	Maintain business resources	
BSBCUS201A	Deliver a service to customers	
BSBCUS301A	Deliver and monitor a service to customers	
BSBINN201A	Contribute to workplace innovation	
BSBITU101A	Operate a personal computer	
BSBITU306A	Design and produce business documents	
LMFBA2002A	Set up, operate and maintain blinds and awnings sector static machines	
LMFBA2006A	Construct vertical-style blinds	

Unit code	Unit title	Prerequisites
LMFBA2007A	Construct textiles for canopy-style awnings	
LMFBA2008A	Construct plastic and timber Venetian-style blinds	
LMFBA2009A	Construct aluminium Venetian-style blinds	
LMFBA2010A	Construct metal louvre and canopy hooded style awnings	
LMFBA2011A	Construct aluminium roll up style awnings	
LMFGN2002B	Move and store materials and products	
LMTTF2014A	Weld plastic materials	
TLIA1107C	Package goods	

Group C

Up to **three (3)** relevant units may be chosen from other units not already selected from Groups A and B, or units available in this Training Package or other endorsed Training Packages and accredited courses. The units must be aligned at Certificate II or Certificate III level (a maximum of 1 from Certificate III)

Units selected from other Training Packages and accredited courses via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF21108 Certificate II in Security Screens and Grills

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform basic tasks in the manufacture of security screens and grills involving known routines and procedures and some accountability for the quality of outcomes.

Job roles/employment outcomes

The LMF21108 Certificate II in Security Screens and Grills reflects vocational outcomes for those performing job roles in security screen and grill manufacture and installation and can include basic glazing tasks.

Application

This qualification is typically used to develop skills and knowledge in security screen and grill manufacturing and installation processes where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of options to be applied. It could include collaboration with others through members of a group or team.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF10108 Certificate I in Furnishing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF31608 Certificate III in Security Screens and Grills and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • collect, organise and understand information related to work orders, basic plans and safety procedures • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
Teamwork	<ul style="list-style-type: none"> • work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
Problem-solving	<ul style="list-style-type: none"> • use checking and inspection techniques to ensure security screens and grills comply with specifications and that instances of non-compliance are remedied
Initiative and enterprise	<ul style="list-style-type: none"> • recognise and respond to circumstances outside instructions or personal competence
Planning and organising	<ul style="list-style-type: none"> • plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage during the production cycle • use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
Self-management	<ul style="list-style-type: none"> • clarify and confirm <i>specified</i> work instructions • plan own work within given task parameters • apply systematic and effective time management • accept responsibility for given tasks • set, monitor and satisfy personal work goals
Learning	<ul style="list-style-type: none"> • satisfy the competency requirements for the job • maintain current knowledge of tools and production materials • maintain current knowledge of production techniques and processes • seek learning opportunities
Technology	<ul style="list-style-type: none"> • use the workplace technology related to the specified work including hand and power tools, calculators and measuring devices

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Packaging Rules

Packaging Rules

To be awarded the LMF21108 Certificate II in Security Screens and Grills, competency must be achieved in **thirteen (13)** units of competency.

- **eight (8)** core units of competency
- **five (5)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **eight (8)** units from this list.

Unit code	Unit title	Prerequisites
LMFGN2002B	Move and store materials and products	
LMFSS2001A	Use security screens and grills hand and power tools	
LMFSS2002A	Rectify faults in product	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS100A	Follow OHS procedures	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **five (5)** units from Groups A or B as specified below.

Group A

Select a minimum of **one (1)** unit from Group A.

Unit code	Unit title	Prerequisites
HLTFA301B	Apply First Aid	
LMFFM2010B	Set up, operate and maintain basic static machines	
LMFGG2001B	Use glass and glazing hand and power tools	
LMFGG2008B	Glaze/re-glaze residential windows and doors	
LMFSS2003A	Prepare product for Australian Standards testing	
LMFSS2004A	Undertake surface preparation	

Group B

Up to **four (4)** units may be chosen from units not already selected from Group A, or units available in this Training Package or other endorsed Training Packages and accredited courses. The units must be aligned at Certificate II or Certificate III level (a maximum of 1 from Certificate III)

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF21208 Certificate II in Stained Glass and Lead Lighting

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform basic stained glass and lead light manufacturing tasks.

Job roles/employment outcomes

The LMF21208 Certificate II in Stained Glass and Lead Lighting reflects vocational outcomes for those performing stained glass and lead lighting operations

Application

This qualification is typically used to develop skills and knowledge in stained glass and lead lighting and glass and glazing operations where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of options to be applied. It could include collaboration with others through members of a group or team.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF10108 Certificate I in Furnishing with units included in this qualification or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF31708 Certificate III In Stained Glass and Lead Lighting and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • collect, organise and understand information related to work orders, basic plans and safety procedures • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
Teamwork	<ul style="list-style-type: none"> • work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
Problem-solving	<ul style="list-style-type: none"> • use checking and inspection techniques to ensure stained glass and lead lighting comply with specifications and that instances of non-compliance are remedied
Initiative and enterprise	<ul style="list-style-type: none"> • recognise and respond to circumstances outside instructions or personal competence
Planning and organising	<ul style="list-style-type: none"> • plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage during the production cycle • use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
Self-management	<ul style="list-style-type: none"> • clarify and confirm specified work instructions • plan own work within given task parameters • apply systematic and effective time management • accept responsibility for given tasks • set, monitor and satisfy personal work goals
Learning	<ul style="list-style-type: none"> • satisfy the competency requirements for the job • maintain current knowledge of tools and production materials • maintain current knowledge of production techniques and processes • seek learning opportunities
Technology	<ul style="list-style-type: none"> • use the workplace technology related to the specified work including hand and power tools, calculators and measuring devices

Packaging Rules

Packaging Rules

To be awarded the LMF21208 Certificate II in Stained Glass and Lead Lighting, competency must be achieved in **thirteen (13)** units of competency.

- **eight (8)** core units of competency
- **five (5)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **eight (8)** units from this list.

Unit code	Unit title	Prerequisites
LMFGG2001B	Use glass and glazing hand and power tools	
LMFGG2002B	Apply First Aid	
LMFGG2005B	Move glass sheets by hand	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS100A	Follow OHS procedures	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **five (5)** units from Groups A and B as specified below.

Group A

Select a minimum of **five (5)** units from Groups A and B.

Unit code	Unit title	Prerequisites
CUVCOR07B	Use drawing techniques to represent the object or idea	
CUVVSP14B	Apply techniques to produce drawings	
LMFFM3033B	Construct jigs and fixtures	
LMFGG2004B	Process thin glass by hand	
LMFGG2007B	Process glass by basic machines	
LMFGG3013B	Construct and repair leadlight and stained glass panels	
LMFGN2002B	Move and store materials and products	
LMFSL2001A	Assemble lead light and stained glass components	
MEM05003B	Perform soft soldering	
TLID307E	Handle dangerous goods/hazardous substances	

Group B

Up to **three (3)** relevant units may be chosen from other units not already selected from Group A or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 3 units) or Certificate III level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group A must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF21308 Certificate II in Coopering

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform basic coopering tasks involving known routines and procedures and some accountability for the quality of outcomes.

Job roles/employment outcomes

The LMF21308 Certificate II in Coopering reflects vocational outcomes for those performing timber barrel construction with metal fixings and can include basic welding techniques.

Application

This qualification is typically used to develop skills and knowledge in barrel construction where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of options to be applied. It could include collaboration with others through members of a group or team.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF10108 Certificate I in Furnishing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF31308 Certificate III in Coopering and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • collect, organise and understand information related to work orders, basic plans and safety procedures • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
Teamwork	<ul style="list-style-type: none"> • work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
Problem-solving	<ul style="list-style-type: none"> • use checking and inspection techniques to ensure barrels comply with specifications and that instances of non-compliance are remedied
Initiative and enterprise	<ul style="list-style-type: none"> • recognise and respond to circumstances outside instructions or personal competence
Planning and organising	<ul style="list-style-type: none"> • plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage during the production cycle • use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
Self-management	<ul style="list-style-type: none"> • clarify and confirm specified work instructions • plan own work within given task parameters • apply systematic and effective time management • accept responsibility for given tasks • set, monitor and satisfy personal work goals
Learning	<ul style="list-style-type: none"> • satisfy the competency requirements for the job • maintain current knowledge of tools and production materials • maintain current knowledge of production techniques and processes • seek learning opportunities
Technology	<ul style="list-style-type: none"> • use the workplace technology related to the specified work including hand and power tools, calculators and measuring devices

Packaging Rules

Packaging Rules

To be awarded the LMF21308 Certificate II in Coopering, competency must be achieved in **thirteen (13)** units of competency.

- **six (6)** core units of competency
- **seven (7)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **six (6)** units from this list.

Unit code	Unit title	Prerequisites
LMFCP2001A	Use coopering sector hand and power tools	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS100A	Follow OHS procedures	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **seven (7)** units from Groups A, B and C as specified below.

Group A

Select a minimum of **two (2)** units from Group A

Unit code	Unit title	Prerequisites
LMFCP2002A	Produce barrels using non-fired	

Unit code	Unit title	Prerequisites
	processes	
LMFFM2006B	Hand make timber joints	
LMFFM2010B	Set up, operate and maintain basic static machines	

Group B

Select a minimum of **two (2)** units from Group B

Unit code	Unit title	Prerequisites
LMFFF2004B	Prepare surfaces for finishing	
LMFFM2002B	Assemble furnishing components	
LMFFM2003B	Select and apply hardware	
LMFFM2005B	Join solid timber	
LMFFM2007B	Follow plans to assemble production furniture	
LMFFM2012B	Set up, operate and maintain pressure and clamping machines	
LMFGG2002B	Apply First Aid	
LMFGN2002B	Move and store materials and products	

Unit code	Unit title	Prerequisites
MEM05007C	Perform manual heating and thermal cutting	
MEM05012C	Perform routine manual metal arc welding	
MEM05050B	Perform routine gas metal arc welding	
MEM06001B	Perform hand forging	
MEM18001C	Use hand tools	
TLID207C	Shift a load using manually operated equipment	
TLID307E	Handle dangerous goods/hazardous substances	

Group C

Up to **three (3)** relevant units may be chosen from units not already selected from Groups A and B, or units available in this Training Package or other endorsed Training Packages and accredited courses aligned at Certificate II level.

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF30202 Certificate III in Furniture Finishing

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform a wide range of tasks associated with the preparation of surfaces and applying stains, coatings and finishes to furniture in manufacture or repair.

Job roles/employment outcomes

The LMF30202 Certificate III in Furniture Finishing reflects vocational outcomes for those performing furniture finishing job roles in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in furniture finishing and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF20202 Certificate II in Furniture Finishing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF40202 Certificate IV in Furnishing Technology or similar qualifications plus relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documents, forms and timesheets • use communication technologies efficiently • communicate production abnormalities • demonstrate effective and appropriate communication and interpersonal skills when dealing with people from a range of backgrounds • read, interpret and communicate production schedules • communicate with all team members
Teamwork	<ul style="list-style-type: none"> • work cooperatively with people of different ages, gender, race or religion • liaise with and provide support to other team members • work as part of a team • keep team members informed of changes to work practices • identify team performance required to meet customer needs • provide leadership to others in the team • encourage the sharing of information between team members • plan and support team activities
Problem-solving	<ul style="list-style-type: none"> • identify and report problems and make contributions to their solution • investigate problem causes • implement changes • examine tools for damage, missing components or other defects • identify and promptly address problems or issues • assess quality of work pieces • determine effective work practices • provide problem solving support to team members • problem solve machine operational and maintenance requirements
Initiative and enterprise	<ul style="list-style-type: none"> • seek and provide feedback on procedures • gather and analyse information • record information on the quality and other indicators of production performance • adjust and implement production schedules changes • provide leadership • identify and implement process improvements • coordinate work activities and manufacturing processes • monitor workplace performance • use analytical and decision making skills

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Planning and organising	<ul style="list-style-type: none"> • identify hazards and implement appropriate hazard control measures • organise self and others to meet production schedules • identify and rectify stock shortages in advance • sequence work to maximise safety and productivity • select and use appropriate tools and equipment • determine materials, quality and production requirements • apply time management skills to ensure work flow
Self-management	<ul style="list-style-type: none"> • interpret and apply relevant acts and regulations • keep the work area clean and tidy at all times • conduct regular housekeeping activities • understand own work activities • manage own time and establish own work schedule • develop and implement workplace procedures and instructions • locate, interpret and apply information relevant to own work • monitor and evaluate own work quality • accept responsibility for quality of work
Learning	<ul style="list-style-type: none"> • develop learning activities as appropriate • assess competencies in meeting job requirements • identify own training needs and seek skill development if required • listen to feedback from others • identify sources of information to expand knowledge and understanding • identify and address skill development needs of others in the team
Technology	<ul style="list-style-type: none"> • use software applications effectively • properly start up, operate and shut down computers • work with technology safely and according to workplace standards • establish procedures • carry out pre-operational checks on equipment and machines • operate equipment and machines safely, efficiently and to productivity requirements • monitor and adjust machine functions • perform machine maintenance as determined by workplace procedures • clean and check equipment and machines

Packaging Rules

Packaging Rules

To be awarded the LMF30202 Certificate III in Furniture Finishing, competency must be achieved in **twenty-three (23)** units of competency.

- **ten (10)** core units of competency
- **thirteen (13)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **ten (10)** units from this list.

Unit code	Unit title	Prerequisites
LMFFF2001B	Use furniture finishing sector hand and power tools	
LMFFF2002B	Dismantle/reassemble furniture	
LMFGN3001B	Read and interpret work documents	
LMFGN3002B	Estimate and cost job	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	
TLID307E	Handle dangerous goods/hazardous substances	

ELECTIVE UNITS

Select **thirteen (13)** units from Groups A, B and C as specified below.

Group A

Select a minimum of **eight (8)** units from Group A.

Unit code	Unit title	Prerequisites
LMFFF2003B	Remove surface coatings	
LMFFF2004B	Prepare surfaces for finishing	
LMFFF2005B	Maintain spray equipment and booth	
LMFFF2006B	Apply surface coatings by spray gun	
LMFFF2007B	Apply stains, fillers and bleach	
LMFFF3001B	Match and make up colours	
LMFFF3003B	Apply plural component coatings	
LMFFF3004B	Apply soft rubber techniques	
LMFFF3006B	Repair and touch up surfaces	

Group B

Select at least **one (1)** unit from Group B.

Unit code	Unit title	Prerequisites
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Unit code	Unit title	Prerequisites
LMFFF2008B	Apply surface coatings by hand	
LMFFF3002B	Set up, operate and maintain mechanical coatings systems	
LMFFF3005B	Enhance finishes	
LMFFF3007B	Apply graining and decorative finishes	
LMFFF3008B	Apply traditional French polishing techniques	
LMFFF3009B	Set up, operate and maintain CNC coating systems	

Group C

Up to **four (4)** relevant units may be chosen from units not already selected from Groups A and B, or units available in this Training Package or other endorsed Training Packages and accredited courses. Units must be aligned at Certificate II level (maximum 1 unit), Certificate III level (maximum 4 units) or Certificate IV level (maximum 1 unit)

Units selected from other Training Packages and accredited courses via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF30302 Certificate III in Furniture Making

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform a wide range of tasks in furniture making including interpretation of specifications drawings, use of specialised machines and hand techniques.

Job roles/employment outcomes

The LMF30302 Certificate III in Furniture Making reflects vocational outcomes for those performing furniture manufacture in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in furniture making techniques and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF20309 Certificate II in Furniture Making or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF40202 Certificate IV in Furnishing Technology or similar qualifications plus relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documents, forms and timesheets • use communication technologies efficiently • communicate production abnormalities • demonstrate effective and appropriate communication and interpersonal skills when dealing with people from a range of backgrounds • read, interpret and communicate production schedules • communicate with all team members
Teamwork	<ul style="list-style-type: none"> • work cooperatively with people of different ages, gender, race or religion • liaise with and provide support to other team members • work as part of a team • keep team members informed of changes to work practices • identify team performance required to meet customer needs • provide leadership to others in the team • encourage the sharing of information between team members • plan and support team activities
Problem-solving	<ul style="list-style-type: none"> • identify and report problems and make contributions to their solution • investigate problem causes • implement changes • examine tools for damage, missing components or other defects • identify and promptly address problems or issues • assess quality of work pieces • determine effective work practices • provide problem solving support to team members • problem solve machine operational and maintenance requirements
Initiative and enterprise	<ul style="list-style-type: none"> • seek and provide feedback on procedures • gather and analyse information • record information on the quality and other indicators of production performance • adjust and implement production schedules changes • provide leadership • identify and implement process improvements • coordinate work activities and manufacturing processes • monitor workplace performance • use analytical and decision making skills

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Planning and organising	<ul style="list-style-type: none"> • identify hazards and implement appropriate hazard control measures • organise self and others to meet production schedules • identify and rectify stock shortages in advance • sequence work to maximise safety and productivity • select and use appropriate tools and equipment • determine materials, quality and production requirements • apply time management skills to ensure work flow
Self-management	<ul style="list-style-type: none"> • interpret and apply relevant acts and regulations • keep the work area clean and tidy at all times • conduct regular housekeeping activities • understand own work activities • manage own time and establish own work schedule • develop and implement workplace procedures and instructions • locate, interpret and apply information relevant to own work • monitor and evaluate own work quality • accept responsibility for quality of work
Learning	<ul style="list-style-type: none"> • develop learning activities as appropriate • assess competencies in meeting job requirements • identify own training needs and seek skill development if required • listen to feedback from others • identify sources of information to expand knowledge and understanding • identify and address skill development needs of others in the team
Technology	<ul style="list-style-type: none"> • use software applications effectively • properly start up, operate and shut down computers • work with technology safely and according to workplace standards • establish procedures • carry out pre-operational checks on equipment and machines • operate equipment and machines safely, efficiently and to productivity requirements • monitor and adjust machine functions • perform machine maintenance as determined by workplace procedures • clean and check equipment and machines

Packaging Rules

Packaging Rules

To be awarded the LMF30302 Certificate III in Furniture Making, competency must be achieved in **twenty-eight (28)** units of competency.

- **fifteen (15)** core units of competency
- **thirteen (13)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **fifteen (15)** units from this list.

Unit code	Unit title	Prerequisites
LMFFF2004B	Prepare surfaces for finishing	
LMFFM2001B	Use furniture making sector hand and power tools	
LMFFM2002B	Assemble furnishing components	
LMFFM2006B	Hand make timber joints	
LMFFM2010B	Set up, operate and maintain basic static machines	
LMFFM2011B	Apply manufactured board conversion techniques	
LMFFM3011B	Produce manual and computer-aided production drawings	
LMFGN3001B	Read and interpret work documents	

Unit code	Unit title	Prerequisites
LMFGN3002B	Estimate and cost job	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	
TLID307E	Handle dangerous goods/hazardous substances	

ELECTIVE UNITS

Select **thirteen (13)** units from Groups A or B as specified below.

Group A

Select a minimum of **seven (7)** units from Group A.

Unit code	Unit title	Prerequisites
LMFFM2003B	Select and apply hardware	
LMFFM2004B	Apply sheet laminates by hand	
LMFFM2005B	Join solid timber	
LMFFM2007B	Follow plans to assemble production furniture	

Unit code	Unit title	Prerequisites
LMFFM2008B	Bend and form cane	
LMFFM2009B	Construct cane furniture	
LMFFM2012B	Set up, operate and maintain pressure and clamping machines	
LMFFM3001B	Construct chair and couch frames	
LMFFM3002B	Construct furniture using leg and rail method	
LMFFM3003B	Produce angled and curved furniture using manufactured board	
LMFFM3004B	Produce angled and curved furniture using solid timber	
LMFFM3005B	Fabricate custom furniture	
LMFFM3006B	Install furnishing products	
LMFFM3007B	Prepare and apply decorative surfaces for furniture	
LMFFM3010B	Select timbers for furniture production	
LMFFM3012B	Prepare cutting list from plans and job specifications	

Unit code	Unit title	Prerequisites
LMFFM3013B	Measure and draw site layout for manufactured furniture products	
LMFFM3020B	Set up, operate and maintain sawing machines	
LMFFM3021B	Set up, operate and maintain drilling machines	
LMFFM3022B	Set up, operate and maintain joining machines	
LMFFM3023B	Set up, operate and maintain planing and finishing machines	
LMFFM3024B	Set up, operate and maintain multi-head planing and moulding machines	
LMFFM3025B	Set up, operate and maintain routing and shaping machines	
LMFFM3026B	Set up, operate and maintain mechanical wood turning lathes	
LMFFM3027B	Set up, operate and maintain automated edge banding machines	
LMFFM3028B	Fabricate synthetic solid surface products	

Unit code	Unit title	Prerequisites
LMFFM3030B	Set up, operate and maintain CNC sizing machines	
LMFFM3031B	Set up, operate and maintain CNC machining and processing centres	
LMFFM3032B	Produce and maintain cutting tools	
LMFFM3033B	Construct jigs and fixtures	

Group B

Up to **six (6)** relevant units may be chosen from units not already selected from Group A, or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 1 unit), Certificate III level (maximum 6 units) or Certificate IV level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF30502 Certificate III in Furniture Making (Wood Machining)

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform wood machining for the manufacture of furniture utilising a range of specialist machinery and including preparing and working from drawings and cutting lists.

Job roles/employment outcomes

The LMF30502 Certificate III in Furniture Making (Wood Machining) reflects vocational outcomes for those performing wood machining for furniture making processes in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in wood machining and furniture making techniques and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF20309 Certificate II in Furniture Making or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF40202 Certificate IV in Furnishing Technology or similar qualifications plus relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documents, forms and timesheets • use communication technologies efficiently • communicate production abnormalities • demonstrate effective and appropriate communication and interpersonal skills when dealing with people from a range of backgrounds • read, interpret and communicate production schedules • communicate with all team members
Teamwork	<ul style="list-style-type: none"> • work cooperatively with people of different ages, gender, race or religion • liaise with and provide support to other team members • work as part of a team • keep team members informed of changes to work practices • identify team performance required to meet customer needs • provide leadership to others in the team • encourage the sharing of information between team members • plan and support team activities
Problem-solving	<ul style="list-style-type: none"> • identify and report problems and make contributions to their solution • investigate problem causes • implement changes • examine tools for damage, missing components or other defects • identify and promptly address problems or issues • assess quality of work pieces • determine effective work practices • provide problem solving support to team members • problem solve machine operational and maintenance requirements
Initiative and enterprise	<ul style="list-style-type: none"> • seek and provide feedback on procedures • gather and analyse information • record information on the quality and other indicators of production performance • adjust and implement production schedules changes • provide leadership • identify and implement process improvements • coordinate work activities and manufacturing processes • monitor workplace performance • use analytical and decision making skills

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Planning and organising	<ul style="list-style-type: none"> • identify hazards and implement appropriate hazard control measures • organise self and others to meet production schedules • identify and rectify stock shortages in advance • sequence work to maximise safety and productivity • select and use appropriate tools and equipment • determine materials, quality and production requirements • apply time management skills to ensure work flow
Self-management	<ul style="list-style-type: none"> • interpret and apply relevant acts and regulations • keep the work area clean and tidy at all times • conduct regular housekeeping activities • understand own work activities • manage own time and establish own work schedule • develop and implement workplace procedures and instructions • locate, interpret and apply information relevant to own work • monitor and evaluate own work quality • accept responsibility for quality of work
Learning	<ul style="list-style-type: none"> • develop learning activities as appropriate • assess competencies in meeting job requirements • identify own training needs and seek skill development if required • listen to feedback from others • identify sources of information to expand knowledge and understanding • identify and address skill development needs of others in the team
Technology	<ul style="list-style-type: none"> • use software applications effectively • properly start up, operate and shut down computers • work with technology safely and according to workplace standards • establish procedures • carry out pre-operational checks on equipment and machines • operate equipment and machines safely, efficiently and to productivity requirements • monitor and adjust machine functions • perform machine maintenance as determined by workplace procedures • clean and check equipment and machines

Packaging Rules

Packaging Rules

To be awarded the LMF30502 Certificate III in Furniture Making (Wood Machining), competency must be achieved in **twenty-seven (27)** units of competency.

- **seventeen (17)** core units of competency
- **ten (10)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **seventeen (17)** units from this list.

Unit code	Unit title	Prerequisites
LMFFF2004B	Prepare surfaces for finishing	
LMFFM2001B	Use furniture making sector hand and power tools	
LMFFM2002B	Assemble furnishing components	
LMFFM2006B	Hand make timber joints	
LMFFM2010B	Set up, operate and maintain basic static machines	
LMFFM2011B	Apply manufactured board conversion techniques	
LMFFM3011B	Produce manual and computer-aided production drawings	
LMFFM3012B	Prepare cutting list from plans and job	

Unit code	Unit title	Prerequisites
	specifications	
LMFFM3033B	Construct jigs and fixtures	
LMFGN3001B	Read and interpret work documents	
LMFGN3002B	Estimate and cost job	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	
TLID307E	Handle dangerous goods/hazardous substances	

ELECTIVE UNITS

Select **ten (10)** units from Groups A, B or C as specified below.

Group A

Select a minimum of **four (4)** units from Group A.

Unit code	Unit title	Prerequisites
LMFFM3020B	Set up, operate and maintain sawing machines	
LMFFM3021B	Set up, operate and maintain	

Unit code	Unit title	Prerequisites
	drilling machines	
LMFFM3022B	Set up, operate and maintain joining machines	
LMFFM3023B	Set up, operate and maintain planing and finishing machines	
LMFFM3025B	Set up, operate and maintain routing and shaping machines	

Group B

Select up to **six (6)** units from Groups B and C

Unit code	Unit title	Prerequisites
LMFFM2003B	Select and apply hardware	
LMFFM2004B	Apply sheet laminates by hand	
LMFFM2005B	Join solid timber	
LMFFM2007B	Follow plans to assemble production furniture	
LMFFM2008B	Bend and form cane	
LMFFM2009B	Construct cane furniture	
LMFFM2012B	Set up, operate and maintain pressure and clamping	

Unit code	Unit title	Prerequisites
	machines	
LMFFM3001B	Construct chair and couch frames	
LMFFM3002B	Construct furniture using leg and rail method	
LMFFM3003B	Produce angled and curved furniture using manufactured board	
LMFFM3004B	Produce angled and curved furniture using solid timber	
LMFFM3005B	Fabricate custom furniture	
LMFFM3006B	Install furnishing products	
LMFFM3007B	Prepare and apply decorative surfaces for furniture	
LMFFM3010B	Select timbers for furniture production	
LMFFM3013B	Measure and draw site layout for manufactured furniture products	
LMFFM3024B	Set up, operate and maintain multi-head planing and moulding machines	
LMFFM3026B	Set up, operate	

Unit code	Unit title	Prerequisites
	and maintain mechanical wood turning lathes	
LMFFM3027B	Set up, operate and maintain automated edge banding machines	
LMFFM3028B	Fabricate synthetic solid surface products	
LMFFM3030B	Set up, operate and maintain CNC sizing machines	
LMFFM3031B	Set up, operate and maintain CNC machining and processing centres	
LMFFM3032B	Produce and maintain cutting tools	

Group C

Up to **five (5)** relevant units may be chosen from units not already selected from Group A and B, or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 1 unit), Certificate III level (maximum 6 units) or Certificate IV level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF30602 Certificate III in Glass and Glazing

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform a range of glass and glazing job roles including safely processing, moving and installing various types of glass and handling glass materials and components.

Job roles/employment outcomes

The LMF30602 Certificate III in Glass and Glazing reflects vocational outcomes for those performing glass and glazing functions in residential and commercial operations and could include manufacturing, processing and installation. Job roles would be in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in a full range of glass and glazing techniques and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF20402 Certificate II in Glass and Glazing with units included in this qualification or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include Furnishing Certificate IV or Diploma and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

Depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Licensing of glazing work applies in Queensland, NSW and South Australia. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documents, forms and timesheets • use communication technologies efficiently • communicate production abnormalities • demonstrate effective and appropriate communication and interpersonal skills when dealing with people from a range of backgrounds • read, interpret and communicate production schedules • communicate with all team members
Teamwork	<ul style="list-style-type: none"> • work cooperatively with people of different ages, gender, race or religion • liaise with and provide support to other team members • work as part of a team • keep team members informed of changes to work practices • identify team performance required to meet customer needs • provide leadership to others in the team • encourage the sharing of information between team members • plan and support team activities
Problem-solving	<ul style="list-style-type: none"> • identify and report problems and make contributions to their solution • investigate problem causes • implement changes • examine tools for damage, missing components or other defects • identify and promptly address problems or issues • assess quality of work pieces • determine effective work practices • provide problem solving support to team members • problem solve machine operational and maintenance requirements
Initiative and enterprise	<ul style="list-style-type: none"> • seek and provide feedback on procedures • gather and analyse information • record information on the quality and other indicators of production performance • adjust and implement production schedules changes • provide leadership • identify and implement process improvements • coordinate work activities and manufacturing processes • monitor workplace performance • use analytical and decision making skills

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Planning and organising	<ul style="list-style-type: none"> • identify hazards and implement appropriate hazard control measures • organise self and others to meet production schedules • identify and rectify stock shortages in advance • sequence work to maximise safety and productivity • select and use appropriate tools and equipment • determine materials, quality and production requirements • apply time management skills to ensure work flow
Self-management	<ul style="list-style-type: none"> • interpret and apply relevant acts and regulations • keep the work area clean and tidy at all times • conduct regular housekeeping activities • understand own work activities • manage own time and establish own work schedule • develop and implement workplace procedures and instructions • locate, interpret and apply information relevant to own work • monitor and evaluate own work quality • accept responsibility for quality of work
Learning	<ul style="list-style-type: none"> • develop learning activities as appropriate • assess competencies in meeting job requirements • identify own training needs and seek skill development if required • listen to feedback from others • identify sources of information to expand knowledge and understanding • identify and address skill development needs of others in the team
Technology	<ul style="list-style-type: none"> • use software applications effectively • properly start up, operate and shut down computers • work with technology safely and according to workplace standards • establish procedures • carry out pre-operational checks on equipment and machines • operate equipment and machines safely, efficiently and to productivity requirements • monitor and adjust machine functions • perform machine maintenance as determined by workplace procedures • clean and check equipment and machines

Packaging Rules

Packaging Rules

To be awarded the LMF30602 Certificate III in Glass and Glazing, competency must be achieved in **twenty-four (24)** units of competency.

- **fourteen (14)** core units of competency
- **ten (10)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Select all **fourteen (14)** units from this list:

Unit code	Unit title	Prerequisites
LMFGG2001B	Use glass and glazing sector hand and power tools	
LMFGG2002B	Apply First Aid	
LMFGG2003B	Operate glass freefall rack and Table	
LMFGG2004B	Process thin glass by hand	
LMFGG2005B	Move glass sheets by hand	
LMFGG2007B	Process glass by basic machines	
LMFGG2008B	Glaze/reglaze residential windows and doors	
LMFGG3002B	Assess glass and glazing requirements	
LMFGG3004B	Process thick glass by hand	
MSAENV272B	Participate in environmentally sustainable work	

Unit code	Unit title	Prerequisites
	practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select a maximum of **ten (10)** elective units from Groups A and B as specified below.

Group A

A minimum of **six (6)** units must be chosen from Group A

Unit code	Unit title	Prerequisites
LMFGG2006B	Move single glass sheets by mechanical means	
LMFGG2009B	Fabricate and assemble metal frames	
LMFGG2010B	Fabricate and install insect and security screens	
LMFGG3001B	Store and handle glass	
LMFGG3003B	Move block/bulk glass sheet by mechanical means	
LMFGG3005B	Process glass by semi-automatic and automatic machines	
LMFGG3006B	Apply film to glass	
LMFGG3007B	Form glass	
LMFGG3008B	Apply patterns and designs	

Unit code	Unit title	Prerequisites
	to glass	
LMFGG3009B	Set up and operate glass laminating equipment	
LMFGG3010B	Set up and operate glass toughening equipment	
LMFGG3011B	Set up and operate glass silvering equipment	
LMFGG3012B	Set up and operate insulated glass unit manufacturing equipment	
LMFGG3013B	Construct and repair leadlight panels	
LMFGG3014B	Prepare and install mirrors	
LMFGG3015B	Fabricate and install shower screens and wardrobe doors	
LMFGG3016B	Fabricate and install residential windows and doors	
LMFGG3017B	Fabricate and install commercial glazing	
LMFGG3018B	Prepare and install architectural engineered glazing	
LMFGG3019B	Conduct commercial and structural glazing	

Group B

Up to a maximum of **four (4)** electives may be chosen from those not already selected from Group A, other units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 1 unit), Certificate III level (maximum 4 units) or Certificate IV level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF30702 Certificate III in Mattress and Base Making

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform mattress and base manufacture and assembly including job costing.

Job roles/employment outcomes

The LMF30702 Certificate III in Mattress and Base Making reflects vocational outcomes for those performing mattress and base making processes in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in mattress and base making techniques and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF20502 Certificate II in Mattress and Base Making or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF40202 Certificate IV in Furnishing Technology or similar qualifications plus relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documents, forms and timesheets • use communication technologies efficiently • communicate production abnormalities • demonstrate effective and appropriate communication and interpersonal skills when dealing with people from a range of backgrounds • read, interpret and communicate production schedules • communicate with all team members
Teamwork	<ul style="list-style-type: none"> • work cooperatively with people of different ages, gender, race or religion • liaise with and provide support to other team members • work as part of a team • keep team members informed of changes to work practices • identify team performance required to meet customer needs • provide leadership to others in the team • encourage the sharing of information between team members • plan and support team activities
Problem-solving	<ul style="list-style-type: none"> • identify and report problems and make contributions to their solution • investigate problem causes • implement changes • examine tools for damage, missing components or other defects • identify and promptly address problems or issues • assess quality of work pieces • determine effective work practices • provide problem solving support to team members • problem solve machine operational and maintenance requirements
Initiative and enterprise	<ul style="list-style-type: none"> • seek and provide feedback on procedures • gather and analyse information • record information on the quality and other indicators of production performance • adjust and implement production schedules changes • provide leadership • identify and implement process improvements • coordinate work activities and manufacturing processes • monitor workplace performance • use analytical and decision making skills

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Planning and organising	<ul style="list-style-type: none"> • identify hazards and implement appropriate hazard control measures • organise self and others to meet production schedules • identify and rectify stock shortages in advance • sequence work to maximise safety and productivity • select and use appropriate tools and equipment • determine materials, quality and production requirements • apply time management skills to ensure work flow
Self-management	<ul style="list-style-type: none"> • interpret and apply relevant acts and regulations • keep the work area clean and tidy at all times • conduct regular housekeeping activities • understand own work activities • manage own time and establish own work schedule • develop and implement workplace procedures and instructions • locate, interpret and apply information relevant to own work • monitor and evaluate own work quality • accept responsibility for quality of work
Learning	<ul style="list-style-type: none"> • develop learning activities as appropriate • assess competencies in meeting job requirements • identify own training needs and seek skill development if required • listen to feedback from others • identify sources of information to expand knowledge and understanding • identify and address skill development needs of others in the team
Technology	<ul style="list-style-type: none"> • use software applications effectively • properly start up, operate and shut down computers • work with technology safely and according to workplace standards • establish procedures • carry out pre-operational checks on equipment and machines • operate equipment and machines safely, efficiently and to productivity requirements • monitor and adjust machine functions • perform machine maintenance as determined by workplace procedures • clean and check equipment and machines

Packaging Rules

Packaging Rules

To be awarded the LMF30702 Certificate III in Mattress and Base Making, competency must be achieved in **twenty (20)** units of competency.

- **twelve (12)** core units of competency
- **eight (8)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **twelve (12)** units from this list.

Unit code	Unit title	Prerequisites
LMFGN3001B	Read and interpret work documents	
LMFGN3002B	Estimate and cost job	
LMFMB2001B	Use mattress and base sector hand and power tools	
LMFMB2002B	Prepare and assemble base unit	
LMFMB2003B	Assemble mattress components	
LMFMB2004B	Cut mattress and base fabrics	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the	

Unit code	Unit title	Prerequisites
	workplace	
MSAPMSUP106A	Work in a team	
TLID307E	Handle dangerous goods/hazardous substances	

ELECTIVE UNITS

Select **eight (8)** units from Groups A and B as specified below.

Group A

Select a minimum of **three (3)** units from Group A.

Unit code	Unit title	Prerequisites
LMFMB3001B	Assemble springs for mattresses	
LMFMB3002B	Make springs for mattresses and bases	
LMFMB3003B	Set up, operate and maintain a tape edging machine	
LMFMB3004B	Set up, operate and maintain a quilting machine	

Group B

Up to **five (5)** relevant units may be chosen from units not already selected from Group A, or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 1 unit), Certificate III level (maximum 5 units) or Certificate IV level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF30802 Certificate III in Picture Framing

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to prepare design requirements for framing and use mouldings and mat to frame pictures and artwork, including use of glass and glazing materials where required.

Job roles/employment outcomes

The LMF30802 Certificate III in Picture Framing reflects vocational outcomes for those performing picture framing in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in picture framing techniques and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF20602 Certificate II in Picture Framing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include Certificate IV and Diploma qualifications in the Furnishing Training Package and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documents, forms and timesheets • use communication technologies efficiently • communicate production abnormalities • demonstrate effective and appropriate communication and interpersonal skills when dealing with people from a range of backgrounds • read, interpret and communicate production schedules • communicate with all team members
Teamwork	<ul style="list-style-type: none"> • work cooperatively with people of different ages, gender, race or religion • liaise with and provide support to other team members • work as part of a team • keep team members informed of changes to work practices • identify team performance required to meet customer needs • provide leadership to others in the team • encourage the sharing of information between team members • plan and support team activities
Problem-solving	<ul style="list-style-type: none"> • identify and report problems and make contributions to their solution • investigate problem causes • implement changes • examine tools for damage, missing components or other defects • identify and promptly address problems or issues • assess quality of work pieces • determine effective work practices • provide problem solving support to team members • problem solve machine operational and maintenance requirements
Initiative and enterprise	<ul style="list-style-type: none"> • seek and provide feedback on procedures • gather and analyse information • record information on the quality and other indicators of production performance • adjust and implement production schedules changes • provide leadership • identify and implement process improvements • coordinate work activities and manufacturing processes • monitor workplace performance • use analytical and decision making skills

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Planning and organising	<ul style="list-style-type: none"> • identify hazards and implement appropriate hazard control measures • organise self and others to meet production schedules • identify and rectify stock shortages in advance • sequence work to maximise safety and productivity • select and use appropriate tools and equipment • determine materials, quality and production requirements • apply time management skills to ensure work flow
Self-management	<ul style="list-style-type: none"> • interpret and apply relevant acts and regulations • keep the work area clean and tidy at all times • conduct regular housekeeping activities • understand own work activities • manage own time and establish own work schedule • develop and implement workplace procedures and instructions • locate, interpret and apply information relevant to own work • monitor and evaluate own work quality • accept responsibility for quality of work
Learning	<ul style="list-style-type: none"> • develop learning activities as appropriate • assess competencies in meeting job requirements • identify own training needs and seek skill development if required • listen to feedback from others • identify sources of information to expand knowledge and understanding • identify and address skill development needs of others in the team
Technology	<ul style="list-style-type: none"> • use software applications effectively • properly start up, operate and shut down computers • work with technology safely and according to workplace standards • establish procedures • carry out pre-operational checks on equipment and machines • operate equipment and machines safely, efficiently and to productivity requirements • monitor and adjust machine functions • perform machine maintenance as determined by workplace procedures • clean and check equipment and machines

Packaging Rules

Packaging Rules

To be awarded the LMF30802 Certificate III in Picture Framing, competency must be achieved in **twenty-one (21)** units of competency.

- **fourteen (14)** core units of competency
- **seven (7)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **fourteen (14)** units from this list.

Unit code	Unit title	Prerequisites
LMFPPF2001B	Use picture framing sector hand and power tools	
LMFPPF2002B	Cut mouldings to length	
LMFPPF2003B	Join mouldings	
LMFPPF2004B	Mount artwork	
LMFPPF2005B	Cut mat boards	
LMFPPF2006B	Cut and handle glazing materials for framing	
LMFPPF3001B	De-frame artwork	
LMFPPF3005B	Recognise and handle artwork for framing	
LMFPPF3006B	Prepare design requirements for framing	
MSAENV272B	Participate in environmentally sustainable work	

Unit code	Unit title	Prerequisites
	practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **seven (7)** units from Groups A and B as specified below.

Group A

Select a minimum of **three (3)** units from Group A

Unit code	Unit title	Prerequisites
LMFPPF2007B	Assemble artwork package (basic)	
LMFPPF2008B	Recognise and repair finishes of framing materials	
LMFPPF3002B	Decorate mat boards	
LMFPPF3003B	Set up and operate CNC machines	
LMFPPF3004B	Prepare textiles for framing	
LMFPPF3007B	Apply frame finishes	
LMFPPF3008B	Assemble artwork package (complex)	
LMFPPF3009B	Install artwork	

Group B

Up to **four (4)** relevant units may be chosen from units not already selected from Group A, or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 1 unit), Certificate III level (maximum 4 units) or Certificate IV level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF30902 Certificate III in Soft Furnishing

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform soft furnishing sewing, selection, manufacture and installation of curtains and drapes and/or blinds with required fittings and may include manufacture of bedspreads, linen and soft furnishing accessories.

Job roles/employment outcomes

The LMF30902 Certificate III in Soft Furnishing reflects vocational outcomes for those performing reflects vocational outcomes for those performing soft furnishing manufacture and installation processes in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in soft furnishing making and installing techniques and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF20702 Certificate II in Soft Furnishing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF40202 Certificate IV in Furnishing Technology, LMF40408 Certificate IV in Interior Decoration or similar qualifications plus relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documents, forms and timesheets • use communication technologies efficiently • communicate production abnormalities • demonstrate effective and appropriate communication and interpersonal skills when dealing with people from a range of backgrounds • read, interpret and communicate production schedules • communicate with all team members
Teamwork	<ul style="list-style-type: none"> • work cooperatively with people of different ages, gender, race or religion • liaise with and provide support to other team members • work as part of a team • keep team members informed of changes to work practices • identify team performance required to meet customer needs • provide leadership to others in the team • encourage the sharing of information between team members • plan and support team activities
Problem-solving	<ul style="list-style-type: none"> • identify and report problems and make contributions to their solution • investigate problem causes • implement changes • examine tools for damage, missing components or other defects • identify and promptly address problems or issues • assess quality of work pieces • determine effective work practices • provide problem solving support to team members • problem solve machine operational and maintenance requirements
Initiative and enterprise	<ul style="list-style-type: none"> • seek and provide feedback on procedures • gather and analyse information • record information on the quality and other indicators of production performance • adjust and implement production schedules changes • provide leadership • identify and implement process improvements • coordinate work activities and manufacturing processes • monitor workplace performance • use analytical and decision making skills

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Planning and organising	<ul style="list-style-type: none"> • identify hazards and implement appropriate hazard control measures • organise self and others to meet production schedules • identify and rectify stock shortages in advance • sequence work to maximise safety and productivity • select and use appropriate tools and equipment • determine materials, quality and production requirements • apply time management skills to ensure work flow
Self-management	<ul style="list-style-type: none"> • interpret and apply relevant acts and regulations • keep the work area clean and tidy at all times • conduct regular housekeeping activities • understand own work activities • manage own time and establish own work schedule • develop and implement workplace procedures and instructions • locate, interpret and apply information relevant to own work • monitor and evaluate own work quality • accept responsibility for quality of work
Learning	<ul style="list-style-type: none"> • develop learning activities as appropriate • assess competencies in meeting job requirements • identify own training needs and seek skill development if required • listen to feedback from others • identify sources of information to expand knowledge and understanding • identify and address skill development needs of others in the team
Technology	<ul style="list-style-type: none"> • use software applications effectively • properly start up, operate and shut down computers • work with technology safely and according to workplace standards • establish procedures • carry out pre-operational checks on equipment and machines • operate equipment and machines safely, efficiently and to productivity requirements • monitor and adjust machine functions • perform machine maintenance as determined by workplace procedures • clean and check equipment and machines

Packaging Rules

Packaging Rules

To be awarded the LMF30902 Certificate III in Soft Furnishing, competency must be achieved in **twenty (20)** units of competency.

- **six (6)** core units of competency
- **fourteen (14)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **six (6)** units from this list.

Unit code	Unit title	Prerequisites
LMFSF2014B	Use soft furnishing sector hand and power tools	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **fourteen (14)** units from Groups A, B, C and D as specified below.

Group A

Select a maximum of **four (4)** units from **either** Group A or Group B.

Unit code	Unit title	Prerequisites
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Unit code	Unit title	Prerequisites
LMFSF2001B	Cut single layer fabrics	
LMFSF2002B	Machine sew materials	
LMFSF2003B	Machine sew using specific techniques	
LMFSF2007B	Construct unlined curtains/drapes	
LMFSF2008B	Construct lined curtains/drapes	

Group B

Unit code	Unit title	Prerequisites
LMFSF2010B	Make up tracks for window coverings	
LMFSF2011B	Fit and adjust curtain hardware	
LMFSF2012B	Fit and adjust interior blinds	
LMFSF2013B	Dress windows	
LMFSF3014B	Provide technical advice to customers	

Group C

Select a minimum of **five (5)** units from Group C.

Unit code	Unit title	Prerequisites
LMFSF2004B	Hand sew soft furnishings	

Unit code	Unit title	Prerequisites
LMFSF2005B	Operate a steam press	
LMFSF2006B	Calculate fabric quantities for window coverings	
LMFSF2009B	Construct padded pelmets	
LMFSF3001B	Operate drop cutting machines	
LMFSF3002B	Use automated curtain pleating equipment	
LMFSF3003B	Follow patterns to produce window toppings	
LMFSF3004B	Construct Roman-style blinds	
LMFSF3005B	Construct Austrian/festoon-style blinds	
LMFSF3006B	Chemically join textiles	
LMFSF3007B	Lay out patterns and cut fabrics	
LMFSF3008B	Measure up and calculate fabric quantities for window coverings	
LMFSF3009B	Manufacture bedspreads	
LMFSF3010B	Manufacture bed linen and table cloths	

Unit code	Unit title	Prerequisites
LMFSF3011B	Advise customers on interior decoration	
LMFSF3012B	Install motorised curtains and blinds	
LMFSF3013B	Follow patterns to produce soft furnishing accessories	

Group D

Up to **five (5)** relevant units may be chosen from units not already selected from Groups A, B or C, or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 1 unit), Certificate III level (maximum 5 units) or Certificate IV level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group D must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF31002 Certificate III in Upholstery

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform upholstery including dismantling and reassembling furniture and selecting, cutting, sewing and fitting fabric and leather upholstery materials.

Job roles/employment outcomes

The LMF31002 Certificate III in Upholstery reflects vocational outcomes for those performing upholstery job roles including dismantling/reassembling furniture in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in upholstery techniques and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF20802 Certificate II in Upholstery or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF40202 Certificate IV in Furnishing Technology, LMF40408 Certificate IV in Interior Decoration or similar qualifications plus relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documents, forms and timesheets • use communication technologies efficiently • communicate production abnormalities • demonstrate effective and appropriate communication and interpersonal skills when dealing with people from a range of backgrounds • read, interpret and communicate production schedules • communicate with all team members
Teamwork	<ul style="list-style-type: none"> • work cooperatively with people of different ages, gender, race or religion • liaise with and provide support to other team members • work as part of a team • keep team members informed of changes to work practices • identify team performance required to meet customer needs • provide leadership to others in the team • encourage the sharing of information between team members • plan and support team activities
Problem-solving	<ul style="list-style-type: none"> • identify and report problems and make contributions to their solution • investigate problem causes • implement changes • examine tools for damage, missing components or other defects • identify and promptly address problems or issues • assess quality of work pieces • determine effective work practices • provide problem solving support to team members • problem solve machine operational and maintenance requirements
Initiative and enterprise	<ul style="list-style-type: none"> • seek and provide feedback on procedures • gather and analyse information • record information on the quality and other indicators of production performance • adjust and implement production schedules changes • provide leadership • identify and implement process improvements • coordinate work activities and manufacturing processes • monitor workplace performance • use analytical and decision making skills

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Planning and organising	<ul style="list-style-type: none"> • identify hazards and implement appropriate hazard control measures • organise self and others to meet production schedules • identify and rectify stock shortages in advance • sequence work to maximise safety and productivity • select and use appropriate tools and equipment • determine materials, quality and production requirements • apply time management skills to ensure work flow
Self-management	<ul style="list-style-type: none"> • interpret and apply relevant acts and regulations • keep the work area clean and tidy at all times • conduct regular housekeeping activities • understand own work activities • manage own time and establish own work schedule • develop and implement workplace procedures and instructions • locate, interpret and apply information relevant to own work • monitor and evaluate own work quality • accept responsibility for quality of work
Learning	<ul style="list-style-type: none"> • develop learning activities as appropriate • assess competencies in meeting job requirements • identify own training needs and seek skill development if required • listen to feedback from others • identify sources of information to expand knowledge and understanding • identify and address skill development needs of others in the team
Technology	<ul style="list-style-type: none"> • use software applications effectively • properly start up, operate and shut down computers • work with technology safely and according to workplace standards • establish procedures • carry out pre-operational checks on equipment and machines • operate equipment and machines safely, efficiently and to productivity requirements • monitor and adjust machine functions • perform machine maintenance as determined by workplace procedures • clean and check equipment and machines

Packaging Rules

Packaging Rules

To be awarded the Certificate III in Upholstery, competency must be achieved in **twenty-five (25)** units of competency.

- **sixteen (16)** core units of competency
- **nine (9)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **sixteen (16)** units from this list.

Unit code	Unit title	Prerequisites
LMFGN3001B	Read and interpret work documents	
LMFGN3002B	Estimate and cost job	
LMFUP2001B	Use upholstery sector hand and power tools	
LMFUP2002B	Fit upholstery components	
LMFUP2004B	Machine sew upholstery final cover materials (basic)	
LMFUP2005B	Develop cutting plan and cut single layer upholstery fabric	
LMFUP2006B	Dismantle/reassemble furniture for upholstering	
LMFUP3002B	Fit and apply final cover materials to furniture using basic techniques	
LMFUP3010B	Cut, sew and fit skirts to upholstered furniture	
LMFUP3011B	Cut, sew and fit or fill	

Unit code	Unit title	Prerequisites
	cushions	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	
TLID307E	Handle dangerous goods/hazardous substances	

ELECTIVE UNITS

Select **nine (9)** units from Groups A, B and C as specified below.

Group A

Select a minimum of **three (3)** units from Group A

Unit code	Unit title	Prerequisites
LMFUP2003B	Apply contemporary foundations to upholstered furniture	
LMFUP3001B	Apply traditional foundations to upholstered furniture	
LMFUP3006B	Fit and apply leather to furniture	
LMFUP3008B	Apply finishing	

Unit code	Unit title	Prerequisites
	techniques to upholstered furniture	

Group B

Select a maximum of **six (6)** units from Groups B and C.

Unit code	Unit title	Prerequisites
LMFUP3003B	Fit and apply final cover materials to furniture using decorative techniques	
LMFUP3004B	Lay out patterns and cut leather	
LMFUP3005B	Machine sew upholstery final cover materials (complex)	
LMFUP3007B	Manufacture and fit loose covers	
LMFUP3009B	Develop cutting plan and cut multiple layer upholstery fabric	
LMFUP3012B	Apply marine sewing and installation techniques	
LMFUP3013B	Cut and sew canvas and acrylics	
LMFUP3014B	Set up, operate and maintain CNC cutting machines	

Group C

Up to **six (6)** relevant units may be chosen from units not already selected from Groups A or B, or a maximum of **five (5)** from units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 1 unit), Certificate III level (maximum 4 units) or Certificate IV level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF31102 Certificate III in Production Upholstery

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform production upholstery including dismantling and reassembling furniture and selecting, cutting, sewing and fitting fabric and leather upholstery materials and producing loose covers.

Job roles/employment outcomes

The LMF31102 Certificate III in Production Upholstery reflects vocational outcomes for those performing upholstery job roles including dismantling/reassembling furniture in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in production upholstery techniques and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF20802 Certificate II in Upholstery or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF40202 Certificate IV in Furnishing Technology, LMF40408 Certificate IV in Interior Decoration or similar qualifications plus relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documents, forms and timesheets • use communication technologies efficiently • communicate production abnormalities • demonstrate effective and appropriate communication and interpersonal skills when dealing with people from a range of backgrounds • read, interpret and communicate production schedules • communicate with all team members
Teamwork	<ul style="list-style-type: none"> • work cooperatively with people of different ages, gender, race or religion • liaise with and provide support to other team members • work as part of a team • keep team members informed of changes to work practices • identify team performance required to meet customer needs • provide leadership to others in the team • encourage the sharing of information between team members • plan and support team activities
Problem-solving	<ul style="list-style-type: none"> • identify and report problems and make contributions to their solution • investigate problem causes • implement changes • examine tools for damage, missing components or other defects • identify and promptly address problems or issues • assess quality of work pieces • determine effective work practices • provide problem solving support to team members • problem solve machine operational and maintenance requirements
Initiative and enterprise	<ul style="list-style-type: none"> • seek and provide feedback on procedures • gather and analyse information • record information on the quality and other indicators of production performance • adjust and implement production schedules changes • provide leadership • identify and implement process improvements • coordinate work activities and manufacturing processes • monitor workplace performance • use analytical and decision making skills

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Planning and organising	<ul style="list-style-type: none"> • identify hazards and implement appropriate hazard control measures • organise self and others to meet production schedules • identify and rectify stock shortages in advance • sequence work to maximise safety and productivity • select and use appropriate tools and equipment • determine materials, quality and production requirements • apply time management skills to ensure work flow
Self-management	<ul style="list-style-type: none"> • interpret and apply relevant acts and regulations • keep the work area clean and tidy at all times • conduct regular housekeeping activities • understand own work activities • manage own time and establish own work schedule • develop and implement workplace procedures and instructions • locate, interpret and apply information relevant to own work • monitor and evaluate own work quality • accept responsibility for quality of work
Learning	<ul style="list-style-type: none"> • develop learning activities as appropriate • assess competencies in meeting job requirements • identify own training needs and seek skill development if required • listen to feedback from others • identify sources of information to expand knowledge and understanding • identify and address skill development needs of others in the team
Technology	<ul style="list-style-type: none"> • use software applications effectively • properly start up, operate and shut down computers • work with technology safely and according to workplace standards • establish procedures • carry out pre-operational checks on equipment and machines • operate equipment and machines safely, efficiently and to productivity requirements • monitor and adjust machine functions • perform machine maintenance as determined by workplace procedures • clean and check equipment and machines

Packaging Rules

Packaging Rules

To be awarded the LMF31102 Certificate III in Production Upholstery, competency must be achieved in **twenty-five (25)** units of competency.

- **sixteen (16)** core units of competency
- **nine (9)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **sixteen (16)** units from this list.

Unit code	Unit title	Prerequisites
LMFGN3001B	Read and interpret work documents	
LMFGN3002B	Estimate and cost job	
LMFUP2001B	Use upholstery sector hand and power tools	
LMFUP2002B	Fit upholstery components	
LMFUP2003B	Apply contemporary foundations to upholstered furniture	
LMFUP2004B	Machine sew upholstery final cover materials (basic)	
LMFUP2005B	Develop cutting plan and cut single layer upholstery fabric	
LMFUP2006B	Dismantle/reassemble furniture for upholstering	
LMFUP3002B	Fit and apply final cover materials to furniture using basic techniques	

Unit code	Unit title	Prerequisites
LMFUP3008B	Apply finishing techniques to upholstered furniture	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	
TLID307E	Handle dangerous goods/hazardous substances	

ELECTIVE UNITS

Select **nine (9)** units from Groups A and B as specified below.

Group A

Select a minimum of **four (4)** units from Group A.

Unit code	Unit title	Prerequisites
LMFUP3012B	Apply marine sewing and installation techniques	
LMFUP3001B	Apply traditional foundations to upholstered furniture	
LMFUP3013B	Cut and sew canvas and acrylics	

Unit code	Unit title	Prerequisites
LMFUP3011B	Cut, sew and fit or fill cushions	
LMFUP3010B	Cut, sew and fit skirts to upholstered furniture	
LMFUP3009B	Develop cutting plan and cut multiple layer upholstery fabric	
LMFUP3003B	Fit and apply final cover materials to furniture using decorative techniques	
LMFUP3006B	Fit and apply leather to furniture	
LMFUP3004B	Lay out patterns and cut leather	
LMFUP3005B	Machine sew upholstery final cover materials (complex)	
LMFUP3007B	Manufacture and fit loose covers	
LMFUP3014B	Set up, operate and maintain CNC cutting machines	

Group B

Up to **five (5)** relevant units may be chosen from units not already selected from Group A, or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 1 unit), Certificate III level (maximum 5 units) or Certificate IV level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF31208 Certificate III in Flooring Technology

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform flooring technology tasks including preparing flooring surfaces and handling, installing and finishing carpet, resilient, vinyl and timber flooring materials.

Job roles/employment outcomes

The LMF31208 Certificate III in Flooring Technology reflects vocational outcomes for those performing flooring job roles including safe handling of materials in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in flooring techniques and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF20908 Certificate II in Flooring Technology or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF40202 Certificate IV in Furnishing Technology or similar furnishing qualifications plus relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documents, forms and timesheets • use communication technologies efficiently • communicate production abnormalities • demonstrate effective and appropriate communication and interpersonal skills when dealing with people from a range of backgrounds • read, interpret and communicate production schedules • communicate with all team members
Teamwork	<ul style="list-style-type: none"> • work cooperatively with people of different ages, gender, race or religion • liaise with and provide support to other team members • work as part of a team • keep team members informed of changes to work practices • identify team performance required to meet customer needs • provide leadership to others in the team • encourage the sharing of information between team members • plan and support team activities
Problem-solving	<ul style="list-style-type: none"> • identify and report problems and make contributions to their solution • investigate problem causes • implement changes • examine tools for damage, missing components or other defects • identify and promptly address problems or issues • assess quality of work pieces • determine effective work practices • provide problem solving support to team members • problem solve machine operational and maintenance requirements
Initiative and enterprise	<ul style="list-style-type: none"> • seek and provide feedback on procedures • gather and analyse information • record information on the quality and other indicators of production performance • adjust and implement production schedules changes • provide leadership • identify and implement process improvements • coordinate work activities and manufacturing processes • monitor workplace performance • use analytical and decision making skills

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Planning and organising	<ul style="list-style-type: none"> • identify hazards and implement appropriate hazard control measures • organise self and others to meet production schedules • identify and rectify stock shortages in advance • sequence work to maximise safety and productivity • select and use appropriate tools and equipment • determine materials, quality and production requirements • apply time management skills to ensure work flow
Self-management	<ul style="list-style-type: none"> • interpret and apply relevant acts and regulations • keep the work area clean and tidy at all times • conduct regular housekeeping activities • understand own work activities • manage own time and establish own work schedule • develop and implement workplace procedures and instructions • locate, interpret and apply information relevant to own work • monitor and evaluate own work quality • accept responsibility for quality of work
Learning	<ul style="list-style-type: none"> • develop learning activities as appropriate • assess competencies in meeting job requirements • identify own training needs and seek skill development if required • listen to feedback from others • identify sources of information to expand knowledge and understanding • identify and address skill development needs of others in the team
Technology	<ul style="list-style-type: none"> • use software applications effectively • properly start up, operate and shut down computers • work with technology safely and according to workplace standards • establish procedures • carry out pre-operational checks on equipment and machines • operate equipment and machines safely, efficiently and to productivity requirements • monitor and adjust machine functions • perform machine maintenance as determined by workplace procedures • clean and check equipment and machines

Packaging Rules

Packaging Rules

To be awarded the LMF31208 Certificate III in Flooring Technology, competency must be achieved in **twenty-five (25)** units of competency.

- **eleven (11)** core units of competency
- **fourteen (14)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **eleven (11)** units from this list.

Unit code	Unit title	Prerequisites
LMFFL2001A	Use flooring technology sector hand and power tools	
LMFFL2002A	Receive and prepare floor covering materials for installation	
LMFFL3001B	Plan and cost flooring technology work	
LMFFL3002A	Establish and maintain a safe flooring technology work environment	
LMFGN3001B	Read and interpret work documents	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make	

Unit code	Unit title	Prerequisites
	measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	
TLID307E	Handle dangerous goods/hazardous substances	

ELECTIVE UNITS

Select **fourteen (14)** units from Groups A, B and C as specified below.

Group A

Select a minimum of **nine (9)** units from Groups A and B with at least **four (4)** units being coded LMFFL3****

Unit code	Unit title	Prerequisites
Carpets		
LMFFL3201A	Install carpet tiles using custom designs	
LMFFL3202A	Install adhesive fixed carpet floor coverings	
LMFFL3203A	Install commercial carpet floor coverings	
LMFFL3204A	Install patterned carpet floor coverings	
LMFFL3205A	Install custom design carpet and decorative finishes	

Unit code	Unit title	Prerequisites
LMFFL3206A	Install synthetic textile floor coverings to sports facilities	
LMFFL3207A	Install carpet floor coverings to custom design stairs	
Resilient		
LMFFL3301A	Install linoleum floor coverings	
LMFFL3302A	Install commercial vinyl floor coverings	
LMFFL3303A	Install resilient floor coverings using custom designs and decorative finishes	
LMFFL3304A	Install resilient tiles using custom design and decorative finishes	
LMFFL3305A	Install rubber floor coverings	
LMFFL3306A	Install resilient sheet to walls	
LMFFL3307A	Install resilient sheet to bench and countertops	
LMFFL3308A	Install anti-static resilient floor coverings	
LMFFL3309A	Install conductive resilient floor	

Unit code	Unit title	Prerequisites
	coverings	
LMFFL3310A	Cut and install resilient floor coverings to stairs	
Coatings		
LMFFF3001B	Match and make up colours	
LMFFL3401A	Mix and apply epoxy and seamless floor coverings	
LMFFL3402A	Apply solvent based coatings to timber floors	
LMFFL3403A	Apply water based coatings to timber floors	
LMFFL3404A	Apply oil based coatings to timber floors	
LMFFL3405A	Apply composite based coatings	
LMFFL3406A	Apply emulsion wax coatings	
LMFFL3407A	Apply stains and fillers	
Timber		
LMFFL3501A	Adapt and apply custom designs to timber flooring	
LMFFL3502A	Cut and install timber flooring to stairs	

Unit code	Unit title	Prerequisites
LMFFL3503A	Install direct stick timber flooring	
LMFFL3504A	Detect defective timber flooring	
LMFFL3505A	Install block parquetry flooring	
LMFFL3506A	Install cork tiles	
LMFFL3507A	Install patterned parquetry	
LMFFL3508A	Install sheet mosaic parquetry	
LMFFL3509A	Install sprung timber flooring	
LMFFL3510A	Install strip timber flooring onto battens	
LMFFL3511A	Install strip flooring onto plywood	
LMFFL3512A	Repair timber flooring	
LMFFL3513A	Maintain timber, laminate and engineered flooring	
Sanding and Polishing		
LMFFL3601A	Fine sand timber flooring	
LMFFL3602A	Edge sand timber flooring	
LMFFL3603A	Sand cork flooring	

Unit code	Unit title	Prerequisites
LMFFL3604A	Sand and fill parquetry flooring	
LMFFL3605A	Apply finishes to cork flooring	

Group B

Unit code	Unit title	Prerequisites
LMFFL2003A	Select, operate and maintain floor covering cutting machine	
LMFFL2004A	Moisture test timber and concrete floors	
LMFFL2101A	Remove existing floor coverings	
LMFFL2102A	Prepare, select and apply smoothing and patching compounds	
LMFFL2103A	Select and apply appropriate compounds and additives	
LMFFL2106A	Prepare walls for covering	
LMFFL2111A	Coarse sand timber flooring	
LMFFL2112A	Install hard underlays	
LMFFL2201A	Install carpet cushion/underlays and gripper accessories	

Unit code	Unit title	Prerequisites
LMFFL2202A	Install unpatterned tufted and bonded carpet floor coverings	
LMFFL2203A	Install carpet tiles using standard installation procedures	
LMFFL2204A	Install unpatterned tufted and bonded carpet floor coverings to stairs	
LMFFL2301A	Install lay flat vinyl floor coverings	
LMFFL2302A	Install resilient tiles using standard installation procedures	
LMFFL2501A	Install laminate and engineered timber flooring	
LMFFL2502A	Install impact and sound absorption underlay	
LMFFL2503A	Nail strip timber flooring	
LMFFL2504A	Install expansion joints	
LMFFL2505A	Install mouldings and edge trims to timber floors	
LMFFL3101A	Inspect sub-floors	

Group C

Up to **five (5)** relevant units may be chosen from units not already selected from Groups A or B, or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 2 units), Certificate III level (maximum 4 units) or Certificate IV level (maximum 2 units).

Units selected from other Training Packages and accredited courses via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF31308 Certificate III in Coopering

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform coopering using a variety of specialist machines to work timber and utilising basic welding techniques in the barrel making process.

Job roles/employment outcomes

The LMF31308 Certificate III in Coopering reflects vocational outcomes for those performing coopering job roles in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in coppering techniques and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF21308 Certificate II in Coopering or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include other furnishing qualifications at Certificate IV and Diploma level and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • collect, organise and understand information related to work orders, basic plans and safety procedures • collect, organise and understand detailed technical information related to the materials and the products used in and related to coopering operations • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems • maintain records related to product and materials quality
Teamwork	<ul style="list-style-type: none"> • work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
Problem-solving	<ul style="list-style-type: none"> • use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use • use checking and inspection techniques to ensure barrels comply with specifications and that instances of non-compliance are remedied • identify, anticipate and respond to faults in timber and/or seasoning processes • identify, anticipate and respond to the problems related to timber and material properties • identify and analyse faults in barrels • select and apply the most appropriate barrel maintenance and repair techniques • use sensory evaluation techniques to identify basic wine faults • identify, anticipate and respond to the impact of the barrel properties on the product (wine and spirits)
Initiative and enterprise	<ul style="list-style-type: none"> • recognise and respond to circumstances outside instructions or personal competence
Planning and organising	<ul style="list-style-type: none"> • plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage during the production cycle • use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
Self-management	<ul style="list-style-type: none"> • clarify and confirm specified work instructions • plan work within given task parameters • apply systematic and effective time management

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • accept responsibility for given tasks • set, monitor and satisfy personal work goals
Learning	<ul style="list-style-type: none"> • satisfy the competency requirements for the job • maintain current knowledge of coopering tools and barrel production materials • maintain current knowledge of coopering processes and techniques • seek learning opportunities
Technology	<ul style="list-style-type: none"> • use the workplace technology related to the selection, preparation and use of coopering products and materials including hand and power tools, calculators, measuring devices and technical support systems

Packaging Rules

Packaging Rules

To be awarded the LMF31308 Certificate III in Coopering, competency must be achieved in **twenty-five (25)** units of competency.

- **fifteen (15)** core units of competency
- **ten (10)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **fifteen (15)** units from this list.

Unit code	Unit title	Prerequisites
LMFCP2001A	Use coopering sector hand and power tools	
LMFCP2002A	Produce barrels using non-fired processes	
LMFCP3001A	Apply product knowledge to production	

Unit code	Unit title	Prerequisites
	operations	
LMFCP3002A	Select and season timbers for furniture production	
LMFCP3003A	Produce barrels using fired processes	
LMFFM2006B	Hand make timber joints	
LMFGG2002B	Apply First Aid	
LMFGN2002B	Move and store materials and products	
LMFGN3001B	Read and interpret work documents	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	
TLID307E	Handle dangerous goods/hazardous substances	

ELECTIVE UNITS

Select **ten (10)** units from Groups A, B and C as specified below.

Group A

Select a minimum of **four (4)** units from Group A

Unit code	Unit title	Unit code
LMFFM2010B	Set up, operate and maintain basic static machines	
LMFFM2012B	Set up, operate and maintain pressure and clamping machines	
LMFFM3020B	Set up, operate and maintain sawing machines	
LMFFM3022B	Set up, operate and maintain joining machines	
LMFFM3033B	Construct jigs and fixtures	

Group B

Select up to **six (6)** units form Groups B and C

Unit code	Unit title	Prerequisites
LMFCP3004A	Maintain and repair barrels	
LMFFF2004B	Prepare surfaces for finishing	
LMFFM2002B	Assemble furnishing components	
LMFFM2003B	Select and apply hardware	
LMFFM2005B	Join solid timber	
LMFFM2007B	Follow plans to assemble production furniture	
LMFFM3023B	Set up, operate	

Unit code	Unit title	Prerequisites
	and maintain planing and finishing machines	
LMFFM3024B	Set up, operate and maintain multi-head planing and moulding machines	
LMFFM3025B	Set up, operate and maintain routing and shaping machines	
LMFFM3032B	Produce and maintain cutting tools	
LMFGN3002B	Estimate and cost job	
MEM05007C	Perform manual heating and thermal cutting	
MEM05012C	Perform routine manual metal arc welding	
MEM05050B	Perform routine gas metal arc welding	
MEM06001B	Perform hand forging	
MEM18001C	Use hand tools	

Group C

Up to **five (5)** relevant units may be chosen from units not already selected from Groups A or B, or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 1 unit), Certificate III level (maximum 5 units) or Certificate IV level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF31408 Certificate III in Musical Instrument Making and Repair

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to manufacture and repair a wide range of musical instruments.

Job roles/employment outcomes

The LMF31408 Certificate III in Musical Instrument Making and Repair reflects vocational outcomes for those performing the manufacture and repair of musical instruments in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in making and repairing musical instruments and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF10108 Certificate I in Furnishing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF40308 Certificate IV in Musical Instrument Making and Repair and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> collect, organise and understand information related to work orders, basic plans and safety procedures
Teamwork	<ul style="list-style-type: none"> collect, organise and understand detailed technical information related to the materials and the products used in and related to musical instrument making and repairs communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems maintain records related to product and materials quality
Problem-solving	<ul style="list-style-type: none"> work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
Initiative and enterprise	<ul style="list-style-type: none"> use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use use checking and inspection techniques to ensure instruments comply with specifications and that instances of non-compliance are remedied identify, anticipate and respond to faults in timber and/or seasoning processes identify, anticipate and respond to the problems related to timber and material properties identify and analyse faults in instruments select and apply the most appropriate instrument maintenance and repair techniques
Planning and organising	<ul style="list-style-type: none"> identify, anticipate and respond to the impact of the instruments properties on the product (music)
Self-management	<ul style="list-style-type: none"> clarify and confirm specified work instructions plan work within given task parameters apply systematic and effective time management accept responsibility for given tasks set, monitor and satisfy personal work goals
Learning	<ul style="list-style-type: none"> satisfy the competency requirements for the job maintain current knowledge of instrument making and repairing tools and production materials maintain current knowledge of instruments making and repairing processes and techniques seek learning opportunities
Technology	<ul style="list-style-type: none"> use the workplace technology related to the selection, preparation and use of instrument products and materials

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	including hand and power tools, calculators, measuring devices and technical support systems
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Packaging Rules**Packaging Rules**

To be awarded the LMF31408 Certificate III in Musical Instrument Making and Repair, competency must be achieved in **twenty-five (25)** units of competency.

- **nine (9)** core units of competency
- **sixteen (16)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **nine (9)** units from this list.

Unit code	Unit title	Prerequisites
LMFFF2001B	Use furniture finishing sector hand and power tools	
LMFFM3033B	Construct jigs and fixtures	
LMFGN3001B	Read and interpret work documents	
LMFMI3001A	Assemble instrument components	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	

Unit code	Unit title	Prerequisites
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **sixteen (16)** units from Groups A, B and C as specified below.

Group A

Select a minimum of **one (1)** unit from Group A

Unit code	Unit title	Prerequisites
LMFMI3003A	Manufacture acoustic guitars	
LMFMI3004A	Manufacture brass instruments	
LMFMI3005A	Manufacture electric guitars	
LMFMI3006A	Manufacture percussion instruments	
LMFMI3007A	Manufacture special stringed instruments	
LMFMI3008A	Manufacture stringed instruments	

Group B

Select a minimum of **nine (9)** units from Group B

Unit code	Unit title	Prerequisites
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Unit code	Unit title	Prerequisites
CUVCOR07B	Use drawing techniques to represent the object or idea	
CUVCOR08B	Produce drawings to represent and communicate the concept	
CUVDES01A	Apply colour theory in response to a brief	
CUVVSP01B	Produce calligraphy	
CUVVSP14B	Apply techniques to produce drawings	
CUVVSP15B	Produce drawings	
LMFFF2007B	Apply stains, fillers and bleach	
LMFFF2008B	Apply surface coatings by hand	
LMFFF3003B	Apply plural component coatings	
LMFFF3004B	Apply soft rubber techniques	
LMFFF3005B	Enhance finishes	
LMFFM2010B	Set up, operate and maintain basic static machines	
LMFFM3011B	Produce manual and computer-aided production	

Unit code	Unit title	Prerequisites
	drawings	
LMFGN2002B	Move and store materials and products	
LMFGN3002B	Estimate and cost job	
LMFMI3002A	Construct and apply decorative treatments and finishes to musical instruments	
LMFMI3009A	Repair brass instruments	
LMFMI3010A	Repair percussion instruments	
LMFMI3011A	Repair woodwind instruments	
MEM05003B	Soft soldering	
TLID207C	Shift a load using manually operated equipment	
TLID307E	Handle dangerous goods/hazardous substances	

Group C

Up to **six (6)** relevant units may be chosen from units not already selected from Groups A or B, or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 2 units), Certificate III level (maximum 6 units) or Certificate IV level (maximum 2 units).

Units selected from other Training Packages and accredited courses via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF31508 Certificate III in Piano Technology

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to repair, rebuild, re-pin, restring and tune upright and grand pianos.

Job roles/employment outcomes

The LMF31508 Certificate III in Piano Technology reflects vocational outcomes for those performing piano repair and tuning job roles in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in piano repair and tuning techniques and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed a relevant Certificate II Furnishing qualification such as LMF20202 Certificate II in Furniture Finishing or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include relevant Furnishing Certificate IV and Diploma qualifications and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • read and understand documentation • ask questions to gain information • communicate ideas and information to enable confirmation of work requirements, plans and specifications, coordination of work with other workers and customer, and report of work outcomes and problems • provide written and verbal information to customers regarding the tuning and/or repair • apply effective listening techniques • collect, organize and understand information related to piano tuning and repair work orders, work plans and safety procedures • complete standardized workplace information • use communication technologies efficiently • complete written documents, job cards, forms, timesheets and quotations • greet customer in an appropriate manner, use appropriate questioning and listening techniques and provide feedback to customer to satisfy customer needs and requirements
Teamwork	<ul style="list-style-type: none"> • work with others and in a team to assess tuning and repair requirements • develop positive workplace relationships • work with others and in a team to repair pianos • work as part of a team • share information with others relating to tuning and repair • work collaboratively with others to complete tasks in a timely manner • identify team performance required to meet customer needs
Problem-solving	<ul style="list-style-type: none"> • identify and report tuning and repair problems and make contribution to their solution • apply knowledge of tuning and repair processes to problem solving • use pre-checking and inspection techniques to anticipate problems and identify tools or equipment faults and take appropriate action • assess and evaluate skill requirements of self and others to perform tasks • identify and select practical solutions to problems using analytical skills • identify, diagnose and rectify faults • use problem solving techniques

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<ul style="list-style-type: none"> • rectify problems and faults • re-interpret customers' statements of problems into solution • resolve conflict through negotiation to ensure customer is happy with sound of piano
Initiative and enterprise	<ul style="list-style-type: none"> • participate in activities to initiate new ideas and suggest improvements to work practices • participate in establishing new ideas and work specifications for tuning pianos and repairing faults • show independence and initiative in making decisions • discuss initiative with colleagues to generate a range of options • assess and take appropriate action to minimize risks • manage innovation and change • determine opportunities to improve processes • collect and monitor information to identify trends that may require remedial action
Planning and organising	<ul style="list-style-type: none"> • plan and organize activities to avoid any backtracking, workflow interruptions, rework or wastage, including preparation and layout of the worksite and selection of tools and equipment • collect and organize information for the purpose of: <ul style="list-style-type: none"> • planning tasks and identifying task outcomes • planning use of resources • assessing and prioritizing tasks • managing time and resources • plan work requirements for self and others to meet tuning and repair schedules • sequence work to maximize safety and productivity • participate in continuous improvement processes
Self-management	<ul style="list-style-type: none"> • manage own time to complete tuning and repair against set deadlines, especially where piano is required for performances • use feedback from customer to improve work performance in tuning • take responsibility and display confidence in own ideas • prioritise own work to meet customer's requirements regarding completion time • manage own work performance to: <ul style="list-style-type: none"> • follow OHS and workplace practices • plan and organize work schedules and routines • maintain required production output • assess quality of own work

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • assess own skills and knowledge
Learning	<ul style="list-style-type: none"> • adapt to new skill requirements • research and apply new ideas and techniques • locate, interpret and apply information on piano technology and the use and maintenance of hand and power tools • apply mathematical applications for estimation and measurement • modify activities to cater for variations in workplace contexts and environment when tuning and repairing pianos • invest time and effort into learning new skills and techniques • be open to learning and accommodate change • apply reflective skills
Technology	<ul style="list-style-type: none"> • use workplace technology related to piano technology, including specified tools, equipment, calculators and measuring devices for piano tuning and repair • use hand and power tools to tune and repair pianos • use equipment to maintain and repair hand tools, power tools and holding and supporting equipment • use calculators and measuring devices to take measurements and estimate material requirements • use IT to organize, report and record information • use technology relevant to tuning/repairing pianos • use communication technologies in the workplace

Packaging Rules

Packaging Rules

To be awarded the LMF31508 Certificate III in Piano Technology, competency must be achieved in **twenty-five (25)** units of competency.

- **five (5)** core units of competency
- **twenty (20)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **five (5)** units from this list.

Unit code	Unit title	Prerequisites
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **twenty (20)** units from Groups A, B and C as specified below.

Group A

Select a minimum of **twelve (12)** units from Group A

Unit code	Unit title	Prerequisites
LMFPT3001A	Develop knowledge of piano industry	
LMFPT3002A	Select materials for piano actions and key repairs	
LMFPT3003A	Repair upright and grand piano actions, keys and pedals	
LMFPT3004A	Rebuild upright and grand piano actions, keys and pedals	
LMFPT3005A	Re-string and re-pin a piano	

Unit code	Unit title	Prerequisites
LMFPT3006A	Regulate actions, keys and pedals of upright pianos	
LMFPT3007A	Regulate actions, keys and pedals of Grand Pianos	
LMFPT3008A	Understand piano tuning theory and basic acoustics	
LMFPT3009A	Develop control of tuning hammers	
LMFPT3010A	Pitch raise	
LMFPT3011A	Tune unisons aurally to a beatless condition	
LMFPT3012A	Tune octaves aurally to appropriate stretch	
LMFPT3013A	Tune a temperament octave to produce an equally tempered scale	
LMFPT3014A	Tune a piano aurally and/or electronically within time and accuracy constraints	
LMFPT3015A	Voice a piano	
LMFPT3016A	Provide advice to customers on piano tuning and repairs	

Group B

Select up to **eight (8)** units from Groups B and C

Unit code	Unit title	Prerequisites
LMFFF2008B	Apply surface coatings by hand	
LMFFF3006B	Repair and touch up surfaces	
LMFFF3008B	Apply traditional French polishing techniques	
LMFFM2002B	Assemble furnishing components	
LMFFM2006B	Hand make timber joints	
LMFFM2010B	Set up/operate and maintain basic static machines	
LMFGN2002B	Move and store materials and products	
LMFGN3001B	Read and interpret work documents	
LMFGN3002B	Estimate and cost job	
MCMT230A	Apply cost factors to work practices	
MCMT231A	Interpret product cost in terms of customer requirements	
TDTD297B	Shift a load using manually-operated equipment	
TLID307E	Handle dangerous and hazardous	

Unit code	Unit title	Prerequisites
	goods	

Group C

Up to **five (5)** relevant units may be chosen from units not already selected from Groups A or B, or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 1 unit), Certificate III level (maximum 5 units) or Certificate IV level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF31608 Certificate III in Security Screens and Grills

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform design, manufacture and repair of security screens and grills.

Job roles/employment outcomes

The LMF31608 Certificate III in Security Screens and Grills reflects vocational outcomes for those performing security screen and grill job roles in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in security screen and grill manufacture and installation techniques and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems.

Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF21108 Certificate II in Security Screens and Grills or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include relevant Furnishing Certificate IV and Diploma qualifications and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • collect, organise and understand information related to work orders, basic plans and safety procedures • collect, organise and understand detailed technical information related to the materials and the products used in and related to cooperating operations • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems • maintain records related to product and materials quality
Teamwork	<ul style="list-style-type: none"> • work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
Problem-solving	<ul style="list-style-type: none"> • use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use • use checking and inspection techniques to ensure security screens and grills comply with specifications and that instances of non-compliance are remedied • identify, anticipate and respond to the problems related to material properties and installation position • identify and analyse faults in security screens and grills manufacture/assembly • select and apply the most appropriate maintenance and repair techniques
Initiative and enterprise	<ul style="list-style-type: none"> • recognise and respond to circumstances outside instructions or personal competence
Planning and organising	<ul style="list-style-type: none"> • plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage during the production cycle • use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
Self-management	<ul style="list-style-type: none"> • clarify and confirm specified work instructions • plan work within given task parameters • apply systematic and effective time management • accept responsibility for given tasks • set, monitor and satisfy personal work goals
Learning	<ul style="list-style-type: none"> • satisfy the competency requirements for the job • maintain current knowledge of cooperating tools and barrel

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<ul style="list-style-type: none"> production materials maintain current knowledge of cooping processes and techniques seek learning opportunities
Technology	<ul style="list-style-type: none"> use the workplace technology related to the selection, preparation and installation of security screens and grills and materials including hand and power tools, calculators, measuring devices and technical support systems

Packaging Rules**Packaging Rules**

To be awarded the LMF31608 Certificate III in Security Screens and Grills, competency must be achieved in **twenty-seven (27)** units of competency.

- fifteen (15)** core units of competency
- twelve (12)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **fifteen (15)** units from this list.

Unit code	Unit title	Prerequisites
BSBFLM309C	Support continuous improvement systems and processes	
BSBINN201A	Contribute to workplace innovation	
BSBPRO301A	Recommend products and services	
BSBPRO401A	Develop product knowledge	
BSBRKG304B	Maintain business records	

Unit code	Unit title	Prerequisites
LMFGN2002B	Move and store materials and products	
LMFGN3001B	Read and interpret work documents	
LMFGN3002B	Estimate and cost job	
LMFSS2001A	Use security screens and grills hand and power tools	
LMFSS2002A	Rectify faults in product	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **twelve (12)** units from Groups A, B and C as specified below.

Group A

Select a minimum of **one (1)** unit from Group A

Unit code	Unit title	Prerequisites
LMFSS3001A	Install and replace security screens and grills	
LMFSS3002A	Apply patterns and	

Unit code	Unit title	Prerequisites
	designs to security screens and grills	
LMFSS3003A	Resolve quality and compliance issues	

Group B

Select up to **eleven (11)** units from Groups B and C with a minimum of **one (1)** chosen from Group B

Unit code	Unit title	Prerequisites
LMFSS2003A	Prepare product for Australian Standards testing	
LMFSS2004A	Undertake surface preparation	
LMFGG2001B	Use glass and glazing hand and power tools	
LMFGG2002B	Apply First Aid	
LMFGG2008B	Glaze/re-glaze residential windows and doors	
LMFFM2010B	Set up, operate and maintain basic static machines	

Group C

Up to **ten (10)** relevant units may be chosen from units not already selected from Groups A or B, or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate III level (maximum 10 units) or Certificate IV level (maximum 2 units).

Units selected from other Training Packages and accredited courses via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF31708 Certificate III in Stained Glass and Lead Lighting

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to construct and repair a range of stained glass and lead lighting components.

Job roles/employment outcomes

The LMF31708 Certificate III in Stained Glass and Lead Lighting reflects vocational outcomes for those performing stained glass and lead lighting manufacture, installation and repair job roles in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in installing and repairing stained glass and lead lighting and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit may be granted towards this qualification by those who have completed LMF21208 Certificate II in Stained Glass and Lead Lighting or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF50310 Diploma of Stained Glass and Lead Lighting and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> collect, organise and understand information related to work orders, basic plans and safety procedures
Teamwork	<ul style="list-style-type: none"> collect, organise and understand detailed technical information related to the materials and the products used in and related to stained glass and lead lighting communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems maintain records related to product and materials quality
Problem-solving	<ul style="list-style-type: none"> work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
Initiative and enterprise	<ul style="list-style-type: none"> use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use use checking and inspection techniques to ensure instruments comply with specifications and that instances of non-compliance are remedied identify, anticipate and respond to faults in materials identify, anticipate and respond to the problems related to glass and material properties identify and analyse faults in stained glass and lead lighting select and apply the most appropriate stained glass and lead lighting maintenance and repair techniques identify, anticipate and respond to the impact of the material properties on the product
Planning and organising	<ul style="list-style-type: none"> recognise and respond to circumstances outside instructions or personal competence use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
Self-management	<ul style="list-style-type: none"> clarify and confirm specified work instructions plan work within given task parameters apply systematic and effective time management accept responsibility for given tasks set, monitor and satisfy personal work goals
Learning	<ul style="list-style-type: none"> satisfy the competency requirements for the job maintain current knowledge of stained glass and lead lighting tools and production materials maintain current knowledge of stained glass and lead lighting

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	processes and techniques <ul style="list-style-type: none"> • seek learning opportunities
Technology	<ul style="list-style-type: none"> • use the workplace technology related to the selection, preparation and use of stained glass and lead lighting products and materials including hand and power tools, calculators, measuring devices and technical support systems

Packaging Rules

Packaging Rules

To be awarded the LMF31708 Certificate III in Stained Glass and Lead Lighting, competency must be achieved in **twenty-five (25)** units of competency.

- **sixteen (16)** core units of competency
- **nine (9)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **sixteen (16)** units from this list.

Unit code	Unit title	Prerequisites
LMFFM3033B	Construct jigs and fixtures	
LMFGG2001B	Use glass and glazing hand and power tools	
LMFGG2002B	Apply First Aid	
LMFGG2005B	Move glass sheets by hand	
LMFGG2007B	Process glass by basic machines	
LMFGG3006B	Apply film to glass	
LMFGG3013B	Construct and repair	

Unit code	Unit title	Prerequisites
	leadlight and stained glass panels	
LMFGN3001B	Read and interpret work documents	
LMFSL2001A	Assemble lead light and stained glass components	
MEM05003B	Perform soft soldering	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS100A	Follow OHS procedures	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	
TLID307E	Handle dangerous goods/hazardous substances	

ELECTIVE UNITS

Select **nine (9)** units from Groups A, B and C as specified below.

Group A

Select a minimum of **one (1)** unit from Group A.

Unit code	Unit title	Prerequisites
LMFSL3001A	Apply product and material	

Unit code	Unit title	Prerequisites
	knowledge to production operations	
LMFSL3002A	Paint glass	
LMFSL3003A	Fire glass	
LMFSL3004A	Protect stained glass and lead lighting	
LMFSL3005A	Fabricate and install residential lead light and stained glass windows and doors	
LMFSL3006A	Prepare and install architectural engineered stained glass and lead lighting	
LMFGG3004B	Process thick glass by hand	

Group B

Select a maximum of **eight (8)** units from Groups B and C.

Unit code	Unit title	Prerequisites
LMFFM3033B	Construct jigs and fixtures	
LMFGG2004B	Process thin glass by hand	
LMFGG2007B	Process glass by basic machines	
LMFGG3013B	Construct and repair leadlight	

Unit code	Unit title	Prerequisites
	and stained glass panels	
CUVCOR07B	Use drawing techniques to represent the object or idea	
LMFGG3001B	Store and handle glass	
LMFGG3007B	Form glass	
LMFGG3008B	Apply patterns and designs to glass	
LMFFM3011B	Produce manual and computer-aided production drawings	
LMFGN2002B	Move and store materials and products	
LMFGN3002B	Estimate and cost job	
CUVCOR08B	Produce drawings to represent and communicate the concept	
CUVVSP01B	Produce calligraphy	
CUVVSP14B	Apply techniques to produce drawings	
CUVVSP15B	Produce drawings	

Group C

Up to **seven (7)** relevant units may be chosen from units not already selected from Groups A and B, or units available in this Training Package or other endorsed Training Packages and accredited courses. Units must be aligned at Certificate II level (maximum 2 units), Certificate III level (maximum 7 units) or Certificate IV level (maximum 2 units)

Units selected from other Training Packages and accredited courses via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF31808 Certificate III in Blinds and Awnings

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to construct and install interior and exterior blinds and awnings using a range of materials, fixtures and fittings.

Job roles/employment outcomes

The LMF31808 Certificate III in Blinds and Awnings reflects vocational outcomes for those constructing and installing blinds and awnings in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in construction and installation of blind and awning techniques and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems.

Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others.

Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF21008 Certificate II in Blinds and Awnings or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include other Furnishing qualifications such as LMF40202 Certificate IV in Furnishing Technology, LMF40408 certificate IV in interior Decoration and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification such as electives in forklift operation and handling of dangerous goods. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> collect, organise and understand information related to work orders, basic plans and safety procedures
Teamwork	<ul style="list-style-type: none"> collect, organise and understand detailed technical information related to the materials and the products used in and related to blinds and awnings communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems maintain records related to product and materials quality
Problem-solving	<ul style="list-style-type: none"> work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
Initiative and enterprise	<ul style="list-style-type: none"> use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use use checking and inspection techniques to ensure instruments comply with specifications and that instances of non-compliance are remedied identify, anticipate and respond to faults in materials identify, anticipate and respond to the problems related to glass and material properties identify and analyse faults in Blinds and Awnings Select and apply the most appropriate Blinds and Awnings maintenance and repair techniques identify, anticipate and respond to the impact of the material properties on the product
Planning and organising	<ul style="list-style-type: none"> recognise and respond to circumstances outside instructions or personal competence use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
Self-management	<ul style="list-style-type: none"> clarify and confirm specified work instructions plan work within given task parameters apply systematic and effective time management accept responsibility for given tasks set, monitor and satisfy personal work goals
Learning	<ul style="list-style-type: none"> satisfy the competency requirements for the job maintain current knowledge of Blinds and Awnings tools and production materials maintain current knowledge of Blinds and Awnings processes

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<ul style="list-style-type: none"> and techniques • seek learning opportunities
Technology	<ul style="list-style-type: none"> • use the workplace technology related to the selection, preparation and use of Blinds and Awnings products and materials including hand and power tools, calculators, measuring devices and technical support systems

Packaging Rules**Packaging Rules**

To be awarded the LMF31808 Certificate III in Blinds and Awnings, competency must be achieved in **twenty-five (25)** units of competency.

- **fifteen (15)** core units of competency
- **ten (10)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **fifteen (15)** units from this list.

Unit code	Unit title	Prerequisites
BSBCUS301A	Deliver and monitor a service to customers	
LMFBA2001A	Use blinds and awnings sector hand and power tools	
LMFBA2004A	Select and apply blinds and awnings sector hardware and fixings	
LMFBA3001A	Install interior blinds	
LMFBA3002A	Install exterior blinds and awnings	

Unit code	Unit title	Prerequisites
LMFGN2002B	Move and store materials and products	
LMFGN3001B	Read and interpret work documents	
LMFSF2001B	Cut single layer fabrics	
LMFSF2002B	Machine sew materials	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	
TLIA1107C	Package goods	

ELECTIVE UNITS

Select **ten (10)** units from Groups A and B as specified below.

Group A

Select a minimum of **three (3)** units from Group A

LMFBA2002A	Set up, operate and maintain blinds and awnings sector static machines	
LMFBA2005A	Construct roll up and pull down style blinds and awnings	

LMFBA2002A	Set up, operate and maintain blinds and awnings sector static machines	
LMFBA2006A	Construct vertical-style blinds	
LMFBA2007A	Construct textiles for canopy-style awnings	

Group B

Select up to **six (6)** units from Groups B and C

Unit code	Unit title	Prerequisites
CPCCCM3001A	Operate elevated work platforms	
BSBADM311A	Maintain business resources	
BSBCUS201A	Deliver a service to customers	
BSBINN201A	Contribute to workplace innovation	
BSBITU306A	Design and produce business documents	
LMFBA2008A	Construct plastic and timber Venetian-style blinds	
LMFBA2009A	Construct aluminium Venetian-style blinds	
LMFBA2010A	Construct metal louvre and canopy hooded style awnings	

Unit code	Unit title	Prerequisites
LMFBA2011A	Construct aluminium roll up style awnings	
LMFBA3003A	Install timber shutters	
LMFBA3004A	Construct folding arm style awnings	
LMFBA3005A	Construct framework for canopy-style awnings	
LMFBA3006A	Construct pleated-style blinds	
LMFBA3007A	Construct wood weave-style blinds	
LMFBA3008A	Construct pelmets	
LMFBA3009A	Provide advice to customers on blinds and awnings	
LMFBA4001A	Assess suitability of blinds or awnings	
LMFGN3002B	Estimate and cost job	
LMFSF3004B	Construct Roman-style blinds	
LMTTF3004A	Perform advanced welding of plastic materials	
TLIA1307C	Receive goods	

Unit code	Unit title	Prerequisites
TLIA1607C	Use inventory systems to organise stock control	
TLIA2107C	Despatch stock	
TLID1007C	Operate a forklift	
TLID207C	Shift a load using manually operated equipment	
TLID307E	Handle dangerous goods/hazardous substances	

Group C

Up to **five (5)** relevant units may be chosen from units not already selected from Groups A or B, or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 2 units), Certificate III level (maximum 5 units) or Certificate IV level (maximum 2 units).

Units selected from other Training Packages and accredited courses via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF31908 Certificate III in Interior Decoration (Retail Services)

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to provide practical assistance and advice to customers on interior decorating in a retail environment.

Job roles/employment outcomes

The LMF31908 Certificate III in Interior Decoration (Retail Services) reflects vocational outcomes for job roles in retailers/department stores that provide products for interior decoration purposes. It involves a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in the provision of product information to assist customers purchase products for use in interior decoration and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed a relevant Furnishing Certificate I or II qualification or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF40408 Certificate IV in Interior Decoration and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • establish communication with customer • use interpersonal communication skills • interpret product related information • follow work instructions • provide relevant information • complete workplace documentation
Teamwork	<ul style="list-style-type: none"> • work cooperatively with others • use skills of others to assist work activity • observe demonstrations of others • share workplace information
Problem-solving	<ul style="list-style-type: none"> • identify customer needs and problems • identify and address customer information needs • report hazards • determine requirements in own work to meet quality standards • seek skills and knowledge of supervisors to solve problems
Initiative and enterprise	<ul style="list-style-type: none"> • identify and recommend improvements to own work processes • seek skill development support • monitor and adjust activity in response to outcomes • assist customers with product suggestions to achieve their decorative ideas
Planning and organising	<ul style="list-style-type: none"> • recognise hazards and follow hazard control measures • follow production sequences for a given process or product • identify customer service requirements • coordinate activity to meet timelines
Self-management	<ul style="list-style-type: none"> • keep the work area clean and tidy at all times • monitor own work to ensure quality standards are achieved • understand own work activities and ask questions if required • apply safety procedures • follow operating instructions for equipment
Learning	<ul style="list-style-type: none"> • ask questions to expand own understanding of work processes or requirements • demonstrate listening skills • identify own skill requirements and seek skill development • identify and access industry product and trend information • access operator manuals to assist own learning
Technology	<ul style="list-style-type: none"> • operate equipment safely and according to operating standards • use information technologies

Packaging Rules

Packaging Rules

To be awarded the LMF31908 Certificate III in Interior Decoration (Retail Services), competency must be achieved in **thirteen (13)** units of competency.

- **four (4)** core units of competency
- **nine (9)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **four (4)** units from this list.

Unit code	Unit title	Prerequisites
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **nine (9)** units from Groups A and B as specified below.

Group A

Select a minimum of **six (6)** units from Group A

Unit code	Unit title	Prerequisites
BSBDES202A	Evaluate the nature of design in a specific industry	

Unit code	Unit title	Prerequisites
	context	
BSBDES301A	Explore the use of colour	
BSBDES305A	Source and apply information on the history and theory of design	
CUFDIG304A	Create visual design components	
CUVCRS03B	Produce computer-aided drawings	
LMFBA3009A	Provide advice to customers on blinds and awnings	
LMFGN3002B	Estimate and cost job	
LMFID3002A	Source and specify decoration products	
LMFID3005A	Style a retail display	
LMFSF2006B	Calculate fabric quantities for window coverings	
LMFSF3011B	Advise customers on interior decoration	
LMFSF3014B	Provide technical advice to customers	
MSAPMOPS101A	Make measurements	
SIRRRPK010A	Recommend home	

Unit code	Unit title	Prerequisites
	and home improvement products and services	
SIRXSLS004A	Build relationships with customers	

Group B

Up to **three (3)** relevant units may be chosen from units not already selected in Group A, or units available in this Training Package or in other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate III or Certificate IV level (maximum 1 Certificate IV unit).

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF32009 Certificate III in Kitchens and Bathrooms (Client Services)

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required by those working in the kitchen or bathroom industry providing limited technical advice to customers within a showroom or domestic environment. Advice will relate to a standardised range of kitchen or bathroom designs and fittings to meet client design requirements.

Job roles/employment outcomes

The LMF32009 Certificate III in Kitchens and Bathrooms (Client Services) reflects vocational outcomes for those working in a sales environment providing technical and design information and advice on kitchen, bathroom, laundry or related products and design packages. Job roles such as showroom sales assistants, customer liaison, and marketing officers work in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in sales and other customer liaison techniques with limited technical information on kitchen and bathroom products and services and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others. Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed a relevant Furnishing Certificate I or II qualification or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification include LMF40508 Certificate IV in Design of Kitchens, Bathrooms and Interior Spaces and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • establish communication with customer • use interpersonal communication skills • interpret product related information • follow work instructions • provide relevant information • complete workplace documentation
Teamwork	<ul style="list-style-type: none"> • work cooperatively with others • use skills of others to assist work activity • observe demonstrations of others • share workplace information
Problem-solving	<ul style="list-style-type: none"> • identify customer needs and problems • identify and address customer information needs • report hazards • determine requirements in own work to meet quality standards • seek skills and knowledge of supervisors to solve problems
Initiative and enterprise	<ul style="list-style-type: none"> • identify and recommend improvements to own work processes • seek skill development support • monitor and adjust work activities in response to outcomes • assist customers with product suggestions to achieve their design ideas
Planning and organising	<ul style="list-style-type: none"> • recognise hazards and follow hazard control measures • follow production sequences for a given process or product • identify customer service requirements • coordinate work activities to meet timelines
Self-management	<ul style="list-style-type: none"> • keep the work area clean and tidy at all times • monitor own work to ensure quality standards are achieved • understand own work activities and ask questions if required • apply safety procedures • follow operating instructions for equipment
Learning	<ul style="list-style-type: none"> • ask questions to expand own understanding of work processes or requirements • demonstrate listening skills • identify own skill requirements and seek skill development • identify and access industry product and trend information • access operator manuals to assist own learning
Technology	<ul style="list-style-type: none"> • operate equipment safely and according to operating standards • use information technologies

Packaging Rules

Packaging Rules

To be awarded the LMF32009 Certificate III in Kitchens and Bathrooms (Client Services), competency must be achieved in **thirteen (13)** units of competency.

- **eight (8)** core units of competency
- **five (5)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **eight (8)** units from this list.

Unit code	Unit title	Prerequisites
BSBCUS301A	Deliver and monitor a service to customers	
BSBDES202A	Evaluate the nature of design in a specific industry context	
LMFGN3001B	Read and interpret work documents	
LMFKB3001A	Identify processes in kitchen and bathroom projects	
LMFKB3007A	Provide advice on cabinet design features	
MEM16006A	Organise and communicate information	
MSAENV272B	Participate in environmentally	

Unit code	Unit title	Prerequisites
	sustainable work practices	
MSAPMOHS200A	Work safely	

ELECTIVE UNITS

Select **five (5)** units from Groups A and B as specified below.

Group A

Select a minimum of **two (2)** units from Group A

Unit code	Unit title	Prerequisites
BSBCCO304B	Provide sales solutions to customers	
BSBCMM301A	Process customer complaints	
BSBDES301A	Explore the use of colour	
BSBDES305A	Source and apply information on the history and theory of design	
BSBFIA301A	Maintain financial records	
CUVCOR09B	Select and apply drawing techniques and media to represent and communicate the concept	
LMFFT4009A	Match furnishing styles/materials to customer requirements	

Unit code	Unit title	Prerequisites
LMFGN3002B	Estimate and cost job	
LMFID4009A	Research architectural styles and movements	
LMFKB3008A	Identify cabinet construction and installation methods	
MEM16008A	Interact with computing technology	
MSACMT251A	Apply quality standards	
MSACMT271A	Use sustainable environmental practices	
MSAPMSUP201A	Receive or despatch goods	
SIRRRPK010A	Recommend home and home improvement products and services	
SIRXINV002A	Maintain and order stock	
SIRXSLS004A	Build relationships with customers	

Group B

Up to **three (3)** relevant units may be chosen from units not already selected in Group A, or units available in this Training Package or in other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate III level or Certificate IV level (maximum 1 Certificate IV unit).

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF32109 Certificate III in Cabinet Making

Modification History

Not applicable.

Description

This qualification covers the skills and knowledge required to perform a range of skills associated with the manufacture and installation of free-standing or fitted cabinets. Two pathways identify the specialisation.

Job roles/employment outcomes

The LMF32109 Certificate III in Cabinet Making describes the trade level outcomes for those working in furniture making and those involved in the manufacture and installation of fitted furniture typically in a kitchen, bathroom and related context. Installation skills may be applied to new or renovation work. The work is in a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in trade level cabinet making work associated with free standing furniture manufacturing or the manufacture and installation of fitted furniture and would cover selecting, adapting and transferring this skill and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems.

Application would be across a range of roles in a variety of contexts with some complexity in the extent and choice of options available and may involve some responsibility for others.

Participation in teams including group or team coordination may be required.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF20309 Certificate II in Furniture Making or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification include LMF40508 Certificate IV in Furniture Design and Technology and relevant supervisory, management or competitive manufacturing qualifications.

Additional qualification advice

There are two pathways offered within the Certificate III in Cabinet Making targeting the skill requirements of free-standing furniture makers and kitchen and bathroom cabinet makers and installers.

Qualification descriptors for this qualification will depend on the pathway selection. Those completing Pathway 1 will achieve a LMF32009 Certificate III in Cabinet Making (Furniture) and those completing Pathway 2 will achieve a LMF32009 Certificate III in Cabinet Making (Kitchens and Bathrooms).

The MSA31108 Certificate III in Competitive Manufacturing is available for employees at this level who already possess technical skills and who require additional manufacturing practice skills above those available in this qualification.

Licensing considerations

Depending on the State and Territory where work is undertaken licensing may relate to this qualification where the candidate is required to work on site assisting in kitchen and bathroom installation. The licensing requirement will usually involve construction induction training. Where licensing is required the unit *CPCCOHS1001A Work safely in the construction industry* should be selected. If no licensing requirement exists e.g. where all work will be off-site then the unit *MSAPMOHS200A Work safely* should be selected.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete written documents, forms and timesheets • use communication technologies efficiently • communicate production abnormalities • demonstrate effective and appropriate communication and interpersonal skills when dealing with people from a range of backgrounds • read, interpret and communicate production schedules • communicate with all team members
Teamwork	<ul style="list-style-type: none"> • work cooperatively with people of different ages, gender, race or religion • liaise with and provide support to other team members • work as part of a team • keep team members informed of changes to work practices • identify team performance required to meet customer needs • provide leadership to others in the team • encourage the sharing of information between team members • plan and support team activities
Problem-solving	<ul style="list-style-type: none"> • identify and report problems and make contributions to their solution • investigate problem causes • implement changes • examine tools for damage, missing components or other defects • identify and promptly address problems or issues • assess quality of work pieces • determine effective work practices • provide problem solving support to team members • problem solve machine operational and maintenance requirements
Initiative and enterprise	<ul style="list-style-type: none"> • seek and provide feedback on procedures • gather and analyse information • record information on the quality and other indicators of production performance • adjust and implement production schedules changes • provide leadership • identify and implement process improvements • coordinate work activities and manufacturing processes • monitor workplace performance • use analytical and decision making skills

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Planning and organising	<ul style="list-style-type: none"> • identify hazards and implement appropriate hazard control measures • organise self and others to meet production schedules • identify and rectify stock shortages in advance • sequence work to maximise safety and productivity • select and use appropriate tools and equipment • determine materials, quality and production requirements • apply time management skills to ensure work flow
Self-management	<ul style="list-style-type: none"> • interpret and apply relevant acts and regulations • keep the work area clean and tidy at all times • conduct regular housekeeping activities • understand own work activities • manage own time and establish own work schedule • develop and implement workplace procedures and instructions • locate, interpret and apply information relevant to own work • monitor and evaluate own work quality • accept responsibility for quality of work
Learning	<ul style="list-style-type: none"> • develop learning activities as appropriate • assess competencies in meeting job requirements • identify own training needs and seek skill development if required • listen to feedback from others • identify sources of information to expand knowledge and understanding • identify and address skill development needs of others in the team
Technology	<ul style="list-style-type: none"> • use software applications effectively • properly start up, operate and shut down computers • work with technology safely and according to workplace standards • establish procedures • carry out pre-operational checks on equipment and machines • operate equipment and machines safely, efficiently and to productivity requirements • monitor and adjust machine functions • perform machine maintenance as determined by workplace procedures • clean and check equipment and machines

Packaging Rules

Packaging Rules

To be awarded the Certificate III in Cabinet Making, competency must be achieved in **twenty eight (28)** units of competency.

- **six (6)** core units of competency
- **twenty-two (22)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **six (6)** units from this list.

Unit code	Unit title	Prerequisites
LMFFM2001B	Use furniture making hand and power tools	
LMFGN3001B	Read and interpret work documents	
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **twenty-two (22)** units from Groups A to F as specified below.

Group A

Select a minimum of **one (1)** unit from Group A

Unit code	Unit title	Prerequisites
CPCCOHS1001A	Work safely in the construction industry	
MSAPMOHS200A	Work safely	

Group B

Select a minimum of **eight (8)** units from Groups B and D for **Pathway 1 - Furniture**

Unit code	Unit title	Prerequisites
LMFFM2002B	Assemble furnishing components	
LMFFF2004B	Prepare surfaces for finishing	
LMFFM2005B	Join solid timber	
LMFFM2006B	Hand make timber joints	
LMFFM3002B	Construct furniture using leg and rail method	
LMFFM3005B	Fabricate custom furniture	
LMFFM3006B	Install furnishing products	

Group C

Select a minimum of **eight (8)** units from Group C and D for **Pathway 2 - Kitchens and Bathrooms**

Unit code	Unit title	Prerequisites
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Unit code	Unit title	Prerequisites
LMFKB2001A	Prepare for cabinet installation	
LMFKB3001A	Identify processes in kitchen and bathroom projects	
LMFKB3002A	Determine requirements for installation of cabinets	
LMFKB3003A	Check and measure fit of cabinets	
LMFKB3004A	Conduct on-site adjustments to cabinets and components	
LMFKB3005A	Fabricate cabinets for the built-in environment	
LMFKB3006A	Install fitted cabinets and components	

Group D

Unit code	Unit title	Prerequisites
BSBCUS301A	Deliver and monitor a service to customers	
LMFFM2003B	Select and apply hardware	
LMFFM2010B	Set up, operate and maintain basic static machines	
LMFFM2011B	Apply	

Unit code	Unit title	Prerequisites
	manufactured board conversion techniques	
LMFFM3012B	Prepare a cutting list from plans and specifications	
LMFFM3030B	Set up, operate and maintain CNC sizing machines	
LMFFM3031B	Set up, operate and maintain CNC machining and processing centres	
LMFGN3002B	Estimate and cost job	
MSACMT230A	Apply cost factors to work practices	

Group E

Select up to **thirteen (13)** units from Groups E and F as specified below

Unit code	Unit title	Prerequisites
CUVCRS03B	Produce computer-aided drawings	
LMFFF2006B	Apply surface coatings by spray gun	
LMFFM2012B	Set up, operate and maintain pressure and clamping machines	
LMFFM3001B	Construct chair and couch frames	

Unit code	Unit title	Prerequisites
LMFFM3003B	Produce angled and curved furniture using manufactured board	
LMFFM3004B	Produce angled and curved furniture using solid timber	
LMFFM3007B	Prepare and apply decorative surfaces for furniture	
LMFFM3010B	Select timbers for furniture production	
LMFFM3011B	Produce manual and computer-aided production drawings	
LMFFM3013B	Measure and draw site layout for manufactured furniture products	
LMFFM3020B	Set up, operate and maintain sawing machines	
LMFFM3021B	Set up, operate and maintain drilling machines	
LMFFM3022B	Set up, operate and maintain joining machines	
LMFFM3023B	Set up, operate and maintain planing and	

Unit code	Unit title	Prerequisites
	finishing machines	
LMFFM3024B	Set up, operate and maintain multi-head planing and moulding machines	
LMFFM3025B	Set up, operate and maintain routing and shaping machines	
LMFFM3026B	Set up, operate and maintain mechanical wood turning lathes	
LMFFM3027B	Set up, operate and maintain automated edge banding machines	
LMFFM3028B	Fabricate synthetic solid surface products	
LMFFM3032B	Produce and maintain cutting tools	
LMFFM3033B	Construct jigs and fixtures	
LMFFT4001B	Coordinate on-site installation of furnishing products	
LMFFT4007B	Sample, inspect and test products to specifications	
LMFFT4008B	Interpret and use workplace	

Unit code	Unit title	Prerequisites
	information	
LMFFT4009B	Match furnishing styles to customer requirements	
MSACMC210A	Manage the impact of change on own work	
MSACMS200A	Apply competitive manufacturing practices	
MSACMS201A	Sustain process improvements	
MSACMT220A	Apply quick changeover procedures	
MSACMT221A	Apply Just in Time (JIT) procedures	
MSACMT240A	Apply 5S procedures in a manufacturing environment	
MSACMT250A	Monitor process capability	
MSACMT251A	Apply quality standards	
MSACMT260A	Use planning software systems in manufacturing	
MSACMT261A	Use SCADA systems in manufacturing	
MSACMT270A	Use sustainable energy practices	

Unit code	Unit title	Prerequisites
MSACMT271A	Use sustainable environmental practices	
MSACMT280A	Undertake root cause analysis	
MSACMT281A	Contribute to the application of a proactive maintenance strategy	
MSAPMOPS363A	Organise on-site work	
MSAPMPER200B	Work in accordance with an issued permit	
MSAPMSUP390A	Use structured problem solving tools	
TLID307E	Handle dangerous goods/hazardous substances	

Group F

Up to **five (5)** relevant units may be chosen from units not already selected from Groups A to E, or units available in this Training Package or other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate II level (maximum 1 unit), Certificate III level (maximum 5 units) or Certificate IV level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group F must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF40202 Certificate IV in Furnishing Technology

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform purchasing, production and quality assurance functions in a furnishing enterprise. This is a senior technical qualification with scope for entry from both trade and non-trade backgrounds.

Job roles/employment outcomes

The LMF40202 Certificate IV in Furnishing Technology reflects vocational outcomes for those performing a broad range of skilled applications in furnishing including requirements to evaluate and analyse current practices, develop new criteria and procedures for performing current practices, and provision of some leadership and guidance to others in the application and planning of the skills.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in furnishing materials purchasing, production and quality assurance that cover a broad range of varied activities or applications in a wide variety of contexts, most of which are complex and non-routine. Leadership and guidance would be involved when organising self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed relevant Furnishing Certificate III qualifications or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF50202 Diploma of Furnishing Technology and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • understand personal requirements of relevant industry and workplace standards, regulations and policies • complete standard documentation • use communication technologies efficiently • communicate technical issues and procedures • communicate to others regarding operational requirements • ensure records are accurate and legible • establish effective working relationships with colleagues • undertake interactive workplace communication • demonstrate effective and appropriate communication and interpersonal skills when dealing with people from a range of backgrounds • develop and communicate work instructions, specifications and procedures for production • communicate with customers to establish design and production requirements
Teamwork	<ul style="list-style-type: none"> • explain and implement work team reporting requirements • monitor work team tasks in accordance with regulatory and workplace requirements • provide leadership and encourage others in working cooperatively with people of different ages, gender, race or religion • undertake appropriate and effective communication with team members • liaise with and provide support to other team members • keep team members informed of changes to work practices • identify team performance required to meet customer needs • provide leadership to others in the team • encourage the sharing of information between team members • plan and support team activities
Problem-solving	<ul style="list-style-type: none"> • identify risks and implement risk control measures for machinery and equipment • identify and address machinery problems and faults • check performance of machinery • assess and evaluate skills requirements of self and others to perform tasks • deal with and promptly resolve issues • conduct tests, analyse results and use other problem solving techniques to determine design and production requirements • manage technical processes and provide problem solving

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<p>support to team members</p> <ul style="list-style-type: none"> • implement changes to procedures when required • examine tools and machinery for damage, missing components or other defects • analyse relevant workplace data to identify hazards, assess risks and evaluate the effectiveness of risk control measures
Initiative and enterprise	<ul style="list-style-type: none"> • seek and provide feedback on processes and procedures • collect and monitor information from a variety of sources including customers, suppliers, technical resources and regulatory authorities • identify non-conformances to standards and take appropriate action • rectify problems promptly and appropriately • monitor and adjust activity in response to variations caused by differences in material, equipment condition and customer requirements • identify and address existing and potential risks • monitor information and records to identify trends that may require remedial action • develop and promote continuous improvement • gather and analyse information on machinery or process problems • record information on the quality and other indicators of performance • adjust and implement production schedules changes
Planning and organising	<ul style="list-style-type: none"> • monitor quality outcomes • allocate tasks to operators • implement contingency plan promptly when incidents occur • identify training needs for the work team and seek training support • monitor equipment condition and performance • identify hazards and implement appropriate hazard control measures • organise self and others to meet production schedules • identify and rectify parts and other shortages in advance • sequence work to maximise safety and productivity • select and use appropriate hand and power tools • identify labour requirements to achieve efficient production and perform required services • determine materials, quality and production requirements • apply time management skills to ensure flow of operations

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Self-management	<ul style="list-style-type: none"> • monitor information in work area • monitor and keep work areas clean and tidy at all times • conduct regular housekeeping activities during shift • locate, interpret and apply relevant ohs, process and equipment information • monitor own work against quality standards • understand own work activities and responsibilities • identify and apply safety procedures, including the use of protective equipment • manage work load priorities • interpret and apply relevant acts and regulations • develop and implement workplace procedures and instructions • establish own work schedule • accept responsibility for quality of work
Learning	<ul style="list-style-type: none"> • recognise limits of own expertise • assess competencies in meeting job requirements • ask questions to expand own knowledge • identify own training needs and seek skill development if required • listen to feedback from others • identify sources of information to expand knowledge and understanding • identify and address skill development needs of others in the team
Technology	<ul style="list-style-type: none"> • use software applications effectively • properly start up, operate and shut down control equipment • work with technology safely and according to workplace standards • establish standard operating procedures • carry out pre-operational checks on equipment and machines • operate equipment and other machines safely, efficiently and to productivity requirements • perform machine maintenance and problem solving • clean and check equipment and machines

Packaging Rules**Packaging Rules**

To be awarded the LMF40202 Certificate IV in Furnishing Technology, competency must be achieved in **nineteen (19)** units of competency.

- **five (5)** core units of competency
- **fourteen (14)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **five (5)** units from this list.

Unit code	Unit title	Prerequisites
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **fourteen (14)** units from Groups A and B as specified below.

Group A

Select a minimum of **nine (9)** units from Group A.

Unit code	Unit title	Prerequisites
LMFAH4001A	Recommend security technology, hardware and services	

Unit code	Unit title	Prerequisites
LMFAH4002A	Prepare door hardware schedules	
LMFDN4001B	Produce drawings from design concepts	
LMFDN4002B	Produce line and component production drawings	
LMFDN4003B	Produce patterns and/or templates	
LMFDN4004B	Design, construct and test jigs	
LMFDN4005B	Work within a furniture design team	
LMFFT4001B	Coordinate on-site installation of furnishing products	
LMFFT4002B	Customise stock lines	
LMFFT4003B	Organise production processes	
LMFFT4004B	Establish and monitor production inventory requirements	
LMFFT4005B	Install and commission CNC software	
LMFFT4006B	Construct prototypes and samples	
LMFFT4007B	Sample, inspect and test products to	

Unit code	Unit title	Prerequisites
	specifications	
LMFFT4008B	Interpret and use workplace information	
LMFFT4009B	Match furnishing style/materials to customer requirements	
LMFFT4010B	Identify and calculate production costs	
LMFFT4011B	Purchase materials and consumables	
LMFFT4012B	Prepare a tender submission	
LMFPP4001B	Design and conduct ornamental frames	
LMFPP4002B	Determine and apply gilding techniques	
MSAENV472B	Implement and monitor environmentally sustainable work practices	

Group B

Up to **five (5)** relevant units can be chosen from other units not already selected from Group A, or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate III level (maximum 1 unit), Certificate IV level or Diploma level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF40308 Certificate IV in Musical Instrument Making and Repair

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform manufacture and repair of a wide range of musical instruments, including design, materials selection/purchase and related business skills.

Job roles/employment outcomes

The LMF40308 Certificate IV in Musical Instrument Making and Repair reflects vocational outcomes for those performing a broad range of skilled applications in musical instrument making and repair including requirements to evaluate and analyse current practices, develop new criteria and procedures for performing current practices, and provision of some leadership and guidance to others in the application and planning of the skills

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in musical instrument making and repair techniques and processes that cover a broad range of varied activities or applications in a wide variety of contexts, most of which are complex and non-routine. Leadership and guidance would be involved when organising self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF31408 Certificate III in Musical Instrument Making and Repair or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include relevant Furnishing Diploma qualifications and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> organise and understand information related to work orders, plans and safety procedures organise and understand detailed technical information related to the materials and the products used in and related to musical instrument making and repairs communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with other workers and customers, and the reporting of work outcomes and problems maintain records related to product and materials quality
Teamwork	<ul style="list-style-type: none"> work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
Problem-solving	<ul style="list-style-type: none"> use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use use checking and inspection techniques to ensure instruments comply with specifications and that instances of non-compliance are remedied identify, anticipate and respond to faults in timber and/or seasoning processes identify, anticipate and respond to the problems related to timber and material properties identify and analyse faults in instruments select and apply the most appropriate instrument maintenance and repair techniques identify, anticipate and respond to the impact of the instruments properties on the product (music)
Initiative and enterprise	<ul style="list-style-type: none"> recognise and respond to circumstances outside instructions or personal competence
Planning and organising	<ul style="list-style-type: none"> plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage during the production cycle use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
Self-management	<ul style="list-style-type: none"> clarify and confirm specified work instructions plan work within given task parameters apply systematic and effective time management accept responsibility for given tasks

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • set, monitor and satisfy personal work goals
Learning	<ul style="list-style-type: none"> • satisfy the competency requirements for the job • maintain current knowledge of instrument making and repairing tools and production materials • maintain current knowledge of instruments making and repairing processes and techniques • seek learning opportunities
Technology	<ul style="list-style-type: none"> • use the workplace technology related to the selection, preparation and use of instrument products and materials including hand and power tools, calculators, measuring devices and technical support systems

Packaging Rules

Packaging Rules

To be awarded the LMF40308 Certificate IV in Musical Instrument Making and Repair, competency must be achieved in **nineteen (19)** units of competency.

- **five (5)** core units of competency
- **fourteen (14)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **five (5)** units from this list.

Unit code	Unit title	Prerequisites
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS200A	Work safely	
MSAPMOPS101A	Make measurements	
MSAPMSUP102A	Communicate in the workplace	

Unit code	Unit title	Prerequisites
MSAPMSUP106A	Work in a team	

ELECTIVE UNITS

Select **fourteen (14)** units from Groups A, B, C and D as specified below with a minimum of **eleven (11)** units in total from Groups A, B and C

Group A

Select a minimum of **one (1)** unit from Group A.

Unit code	Unit title	Prerequisites
LMFMI4001A	Repair acoustic guitars	
LMFMI4002A	Repair electric guitars	
LMFMI4003A	Repair special stringed instruments	
LMFMI4004A	Repair stringed instruments	

Group B

Select a minimum of **six (6)** units from Group B.

Unit code	Unit title	Prerequisites
LMFDN4001B	Produce drawings from design concepts	
LMFDN4002B	Produce line and component production drawings	
LMFDN4003B	Produce patterns	

Unit code	Unit title	Prerequisites
	and/or templates	
LMFDN5001B	Generate and transfer complex computer-aided drawings and specifications	
LMFFM4005A	Hand carve wood to custom design	
LMFFM4006A	Construct joints for custom furniture	
LMFFM4007A	Produce curved and shaped components for custom furniture	
LMFFM4008A	Produce timber veneered components for custom furniture	
LMFFT4009B	Match furnishing style/materials to customer requirements	
LMFFT4010B	Identify and calculate production costs	
LMFFT4011B	Purchase materials and consumables	
LMFFT4012B	Prepare a tender submission	
LMFFT5011B	Develop, trial and evaluate prototypes	
LMFPP4002B	Determine and apply gilding techniques	

Group C

Select a maximum of **three (3)** units from Group C

Unit code	Unit title	Prerequisites
BSBSMB401A	Establish legal and risk management requirements of small business	
BSBSMB402A	Plan small business finances	
BSBSMB403A	Market the small business	
BSBSMB404A	Undertake small business planning	
BSBSMB405A	Monitor and manage small business operations	
BSBSMB406A	Manage small business finances	
BSBSMB407A	Manage a small team	
CULMS010B	Contribute to the preservation of cultural material	
CUVCOR04B	Originate concept for own work and conduct critical discourse	
CUVCOR09B	Select and apply drawing techniques and media to represent and communicate the concept	

Unit code	Unit title	Prerequisites
CUVDSP07B	Research and apply techniques for graphic design	
CUVICS04B	Originate and develop a concept	
CUVVSP02B	Research and experiment with techniques to produce calligraphy	
MSAENV472B	Implement and monitor environmentally sustainable work practices	

Group D

Up to **four (4)** relevant units may be chosen from other units not already selected from Group A, B or C (noting maximum 3 from Group C), or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate III level (maximum 2 units), Certificate IV level or Diploma level (maximum 2 units).

Units selected from other Training Packages and accredited courses via Group D must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF40408 Certificate IV in Interior Decoration

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to provide advice and practical assistance on the finishing and furnishing of existing interior spaces to meet client requirements. Decoration at this level includes residential or commercial environments and involves working directly with the client or with associated professionals such as architects, builders, retailers, interior designers and suppliers required to implement a project.

Job roles/employment outcomes

The LMF40408 Certificate IV in Interior Decoration reflects vocational outcomes in retail, consulting and building businesses as interior decorators or colour consultants performing a broad range of skilled applications in furnishing including requirements to evaluate and analyse current practices, develop new criteria and procedures for performing current practices, and provision of some leadership and guidance to others in the application and planning of the skills.

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in a range of decoration advice and services including:

- research and analysis of the client's goals and requirements
- planning and arranging space
- interior styling
- specifying finishes and furnishings
- selection of colours
- specifications and purchasing.

The work would cover a broad range of varied activities or applications in a wide variety of contexts, most of which are complex and non-routine. Leadership and guidance would be involved when organising self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF31908 Certificate III in Interior Decoration (Retail Services) or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF50408 Diploma of Interior Design and Decoration and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • communicate effectively and efficiently with colleagues, suppliers and clients • interpret correspondence, verbal and written project briefs • interpret work instructions, technical and conceptual information • communicate research findings and creative ideas • visually communicate creative concepts and direction to colleagues, suppliers and clients • use digital forms of communication - emails, digital photo's and scanned document knowledge • produce drawings to communicate the concept • communicate verbally and in writing with contractors and suppliers on technical issues • confirm a brief with client • complete standard documentation • undertake measurements and calculations • undertake interactive workplace communication • present information
Teamwork	<ul style="list-style-type: none"> • share or discuss decoration concepts and ideas with others • work with a diverse range of cultures, trades and backgrounds • liaise and work with suppliers • collaborate on decoration solutions • work with trades and craftspeople to achieve successful project outcomes • work independently or as a team member • demonstrate and encourage others in working cooperatively with people of different ages, gender, race or religion • identify role of others in the decoration process • undertake appropriate and effective communication with others in the design process
Problem-solving	<ul style="list-style-type: none"> • interpret and resolve decoration briefs • analyse research findings • develop and resolve decoration ideas • overcome and find solutions to constraints in project briefs • recognise and address quality issues and problems relating to decoration and business activities • solve problems in relation to the realisation of design decoration outcomes within the client's budget • solve problems in relation to the realisation of design decoration outcomes that are environmentally, economically and socially

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<ul style="list-style-type: none"> sustainable • assess and evaluate skill requirements of self and others to perform tasks • apply knowledge of fabrics and materials to solve decoration problems • assess quality of materials before using in decoration solutions
Initiative and enterprise	<ul style="list-style-type: none"> • explore the potential of factors constraining or impacting on decoration solutions • initiate a particular decoration direction • realise decoration solutions • explore decoration options • manage changes to decoration brief or solution • work autonomously with the confidence to recommend selections and review projects to continually learn and improve service • identify non-conformances to standards and take appropriate action • identify effective ways to achieve decoration outcomes • rectify problems promptly and appropriately
Planning and organising	<ul style="list-style-type: none"> • prepare for undertaking a decoration project • coordinate decoration activities with other project timelines such as construction • organise decoration materials and equipment • make, confirm and alter client and supplier appointments and presentations according to workplace schedules and personnel activities • prepare business correspondence, purchase orders and invoices in a timely manner • prepare effective and clear decoration specifications on time and to agreed industry standards • collect, analyse and organise client information to arrange projects professionally and on time
Self-management	<ul style="list-style-type: none"> • evaluate and monitor own work and the work of others • develop individual project plans • manage own time effectively • establish own work schedules and take responsibility for the deliverables associated with individual projects, team ventures and client proposals • manage own work • monitor information in work area • keep the work area clean and tidy at all times

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> locate, interpret and apply relevant information monitor own work against quality standards understand own work activities and responsibilities manage work load priorities
Learning	<ul style="list-style-type: none"> conduct ongoing professional research in decoration knowledge maintain professional decoration skills manage own learning and professional development activities accept and respond to feedback, and use feedback as an opportunity to improve professional knowledge and skills manage own self-directed learning to continually keep up to date with available products, services and current trends identify shortfalls in knowledge and undertake research or training to fill gaps maintain a knowledge of industry standards assess competencies in meeting job requirements ask questions to expand own knowledge experiment with decoration ideas and review outcomes
Technology	<ul style="list-style-type: none"> observe OHS principles when using technology research technological developments relevant to decoration work use computers and appropriate software to develop and realise a decoration solution use technology to organise and maintain client and business data work with technology safely and according to workplace standards

Packaging Rules

Packaging Rules

To be awarded the LMF40408 Certificate IV in Interior Decoration, competency must be achieved in **nineteen (19)** units of competency.

- eight (8)** core units of competency
- eleven (11)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **eight (8)** units from this list.

Unit code	Unit title	Prerequisites
BSBDES302A	Explore and apply the creative design process to 2D forms	
BSBDES303A	Explore and apply the creative design process to 3D forms	
CUVCOR09B	Select and apply drawing techniques and media to represent and communicate the concept	
CUVCRS04B	Produce technical drawings	
LMFID4001A	Research, analyse and apply colour for interior spaces	
LMFID4002A	Decorate residential interiors	
LMFID4011A	Determine occupational health and safety implications of interior effects	
MSAENV272B	Participate in environmentally sustainable work practices	

ELECTIVE UNITS

Select **eleven (11)** units from Groups A and B as specified below.

Group A

Select a minimum of **seven (7)** units from Group A

Unit code	Unit title	Prerequisites
BSBCRT401A	Articulate, present and debate ideas	
BSBCRT402A	Collaborate in a creative process	
BSBDES301A	Explore the use of colour	
BSBDES305A	Source and apply information on the history and theory of design	
BSBDES401A	Generate design solutions	
BSBDES403A	Develop and extend design skills and practice	
BSBMGT402A	Implement operational plan	
BSBSMB405A	Monitor and manage small business operations	
BSBWOR204A	Use business technology	
CUFDIG303A	Produce and prepare photo images	
CUFDIG304A	Create visual design components	
CUVCOR08B	Produce drawings to represent and communicate the concept	

Unit code	Unit title	Prerequisites
CUVCRS03B	Produce computer-aided drawings	
CUVDSP11B	Research and apply techniques for illustrative work	
CUVDSP15B	Research and apply techniques for application to spatial design	
LMFFDT4012A	Produce ideation drawings	
LMFID3002A	Source and specify decoration products	
LMFID4003A	Prepare a materials board for client presentation	
LMFID4004A	Research and recommend furniture and accessories	
LMFID4005A	Research and recommend soft furnishings for interiors	
LMFID4006A	Research and recommend hard materials and finishes for interiors	
LMFID4007A	Identify materials, construction techniques and methods used in building interiors	

Unit code	Unit title	Prerequisites
LMFID4008A	Assess interior light and recommend light fittings	
LMFID4009A	Research architectural styles and movements	
LMFID4010A	Research interior decoration and design influences	
MEM16006A	Organise and communicate information	
MSAENV472B	Implement and monitor environmentally sustainable work practices	

Group B

Up to **four (4)** relevant units can be chosen from units not already selected from Group A, or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate III level (maximum 1 unit), Certificate IV level (maximum 4 units) or Diploma level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF40508 Certificate IV in Furniture Design and Technology

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform design of furniture and the application of the design into a finished furniture product. This qualification is streamlined to reflect two primary occupational outcomes in the areas of:

1. Fine furniture making - with a focus on skills required to design and produce individual fine furniture for display or custom production.
2. Furniture design - with a focus on skills required to design furniture for volume production.

Job roles/employment outcomes

The LMF40508 Certificate IV in Furniture Design and Technology reflects vocational outcomes in fine furniture making or furniture design with a broad range of skilled applications including requirements to evaluate and analyse current practices, develop new criteria and procedures for performing current practices, and provision of some leadership and guidance to others in the application and planning of the skills

Application

This qualification is typically used to develop skills and a breadth, depth and complexity of knowledge in a range of furniture making and design. The work would cover a broad range of varied activities or applications in a wide variety of contexts, most of which are complex and non-routine. Leadership and guidance would be involved when organising self and others as well as contributing to technical solutions of a non-routine or contingency nature.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF30302 Certificate III in Furniture Making or other relevant qualifications or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF50202 Diploma of Furnishing Technology, LMF50508 Diploma of Furniture Design and Technology and relevant supervisory, management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

The following table contains a summary of the employability skills as identified by the furniture design and technology industries for this qualification. This Table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that reflect skill requirements for this level.

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • communicate effectively and efficiently with colleagues, suppliers and clients • interpret correspondence, verbal and written project briefs • interpret work instructions, technical and conceptual information • communicate research findings and creative ideas • visually communicate creative concepts and direction to colleagues, suppliers and clients • produce drawings to communicate the concept • communicate verbally and in writing on technical issues • confirm a brief with client • complete standard documentation • undertake measurements and calculations • undertake interactive workplace communication
Teamwork	<ul style="list-style-type: none"> • share or discuss concepts and ideas with others • work with a diverse range of cultures, trades and backgrounds • liaise and work with suppliers • collaborate with others • work with trades people to achieve successful project outcomes • work independently or as a team member • demonstrate and encourage others in working cooperatively with people of different ages, gender, race or religion • identify role of others in the design and manufacture processes • undertake appropriate and effective communication with others in the design or manufacture process
Problem solving	<ul style="list-style-type: none"> • analyse research findings • recognise and address quality issues and problems relating to furniture design • solve problems in relation to the realisation of design within the client's budget • solve problems in relation to the realisation of design • seek outcomes that are environmentally, economically and socially sustainable

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • assess and evaluate skill requirements of self and others to perform tasks • apply knowledge of materials to solve problems • assess quality of materials before using in furniture or design
Initiative and enterprise	<ul style="list-style-type: none"> • create or realise furniture designs • explore design and manufacture options • manage changes to brief or solution • identify non-conformances to standards and take appropriate action • rectify problems promptly and appropriately
Planning and organising	<ul style="list-style-type: none"> • prepare for undertaking a furniture design project • organise materials and equipment • prepare effective and clear specifications on time and to agreed industry standards • collect, analyse and organise information to arrange projects professionally and on time
Self management	<ul style="list-style-type: none"> • evaluate and monitor own work and the work of others • manage own time effectively • establish own work schedules and take responsibility for the deliverables associated with individual projects • manage own work • monitor information in work area • keep the work area clean and tidy at all times • locate, interpret and apply relevant information • monitor own work against quality standards • understand own work activities and responsibilities • manage work load priorities
Learning	<ul style="list-style-type: none"> • conduct ongoing professional research in furniture design and technology knowledge • manage own learning and professional development activities • accept and respond to feedback, and use feedback as an opportunity to improve professional knowledge and skills • manage own self-directed learning to continually keep up to date with available products, services and current trends • identify shortfalls in knowledge and undertake research or training to fill gaps • maintain a knowledge of industry standards • assess competencies in meeting job requirements • ask questions to expand own knowledge
Technology	<ul style="list-style-type: none"> • observe OHS principles when using technology • research technological developments relevant to work

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<ul style="list-style-type: none"> work with technology safely and according to workplace standards
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Packaging Rules**Packaging Rules**

To be awarded the LMF40508 Certificate IV in Furniture Design and Technology, competency must be achieved in **nineteen (19)** units of competency.

- six (6)** core units of competency
- thirteen (13)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **six (6)** units from this list.

Unit code	Unit title	Prerequisites
BSBDES401A	Generate design solutions	
LMFFDT4007A	Establish the design brief	
LMFFDT4012A	Produce ideation drawings	
LMFFDT4014A	Research and select furniture materials and technology	
LMFFDT4015A	Research furniture styles and movements	
MSAENV272B	Participate in environmentally sustainable work practices	

ELECTIVE UNITS

Select **thirteen (13)** units from Groups A, B, C and D as specified below.

Group A

Select **one (1)** unit from Group A

Unit code	Unit title	Prerequisites
Stream 1: Fine Furniture Making		
LMFFDT4006A	Establish and maintain a safe furniture making work environment	
Stream 2: Furniture Design		
LMFFDT4008A	Determine occupational health and safety implications of designs	

Group B

Select a minimum of **eight (8)** units from Groups B **OR** C with at least **five (5)** units in each Group being coded LMF*****

Unit code	Unit title	Prerequisites
BSBDES301A	Explore the use of colour	
BSBPMG510A	Manage projects	
BSBSMB403A	Market the small business	
BSBSMB404A	Undertake small business planning	
CUFDIG303A	Produce and prepare photo	

Unit code	Unit title	Prerequisites
	images	
CUVCOR09B	Select and apply drawing techniques and media to represent and communicate the concept	
CUVCRS03B	Produce computer-aided drawings	
CUVCRS04B	Produce technical drawings	
LMFFDT4001A	Apply finishing techniques to custom furniture	
LMFFDT4002A	Assemble custom furniture	
LMFFDT4005A	Construct and evaluate furniture prototypes and samples	
LMFFDT4009A	Prepare and present furniture design information	
LMFFDT4010A	Produce and evaluate developmental furniture models to scale	
LMFFDT4011A	Set up, operate and maintain basic static woodworking machines	
LMFFDT4016A	Select, use and maintain hand	

Unit code	Unit title	Prerequisites
	tools for the creation of custom furniture	
LMFFDT4017A	Set up and operate a wood turning lathe to produce off-centre work	
LMFFDT4018A	Produce templates and jigs for custom made furniture	
LMFFM4005A	Hand carve wood to custom design	
LMFFM4006A	Construct joints for custom furniture	
LMFFM4007A	Produce curved and shaped components for custom furniture	
LMFFM4008A	Produce timber veneered components for custom furniture	
LMFFT4010B	Identify and calculate production costs	
LMFFT4011B	Purchase materials and consumables	

Group C

Select up to **four (4)** units from Group C

Unit code	Unit title	Prerequisites
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Unit code	Unit title	Prerequisites
BSBCRT401A	Articulate, present and debate ideas	
BSBCRT402A	Collaborate in a creative process	
BSBCRT403A	Explore the history and social impact of creativity	
BSBCRT501A	Originate and develop concepts	
BSBDES301A	Explore the use of colour	
BSBDES303A	Explore and apply the creative design process to 3D forms	
BSBDES305A	Source and apply information on the history and theory of design	
BSBDES403A	Develop and extend design skills and practice	
BSBPMG510A	Manage projects	
BSBSMB403A	Market the small business	
BSBSMB404A	Undertake small business planning	
BSBSMB407A	Manage a small team	
CUFDIG303A	Produce and prepare photo images	
CUFDIG304A	Create visual design components	
CUVCOR09B	Select and apply drawing techniques and media to represent and communicate the concept	
CUVCRS03B	Produce computer-aided	

Unit code	Unit title	Prerequisites
	drawings	
CUVCRS04B	Produce technical drawings	
LMFFDT4003A	Assess and record the lifecycle of a product	
LMFFDT4004A	Assess environmental impact of a design	
LMFFDT4005A	Construct and evaluate furniture prototypes and samples	
LMFFDT4009A	Prepare and present furniture design information	
LMFFDT4013A	Research and select furniture finishes	
LMFFDT4010B	Identify and calculate production costs	
MEM15001B	Perform basic statistical quality control	
MEM16006B	Organise and communicate information	
MEM16007B	Work with others in a manufacturing, engineering or related environment	
MEM16008B	Interact with computing technology	
MEM16013A	Operate in a self-directed team	MEM16007B
MEM30001B	Use computer aided drafting systems to produce basic engineering drawings	MEM16006B MEM16008A
MEM30004A	Use CAD to create and display 3D models	MEM16008B

Unit code	Unit title	Prerequisites
MEM30024A	Participate in quality assurance techniques	MEM15001B
MSACMT230A	Apply cost factors to work practices	
MSACMT430A	Improve cost factors in work practices	
MSAENV472B	Implement and monitor environmentally sustainable work practices	

Group D

Up to **four (4)** relevant units can be chosen from units not already selected from Group A, B or C, or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate III level (maximum 2 units), Certificate IV level (maximum 4 units) or Diploma level (maximum 2 units). Note that if any units chosen from Group C have prerequisite requirements, these must be counted in the total number of units.

Units selected from other Training Packages and accredited courses via Group D must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF40609 Certificate IV in Design of Kitchens, Bathrooms and Interior Spaces

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to design kitchens, bathrooms and interior spaces to meet client requirements.

Job roles/employment outcomes

The Certificate IV in Design of Kitchens, Bathrooms and Interior Spaces targets those designing kitchens, bathrooms and other interior spaces that typically feature built-in cabinetry and furniture. Employment outcomes include small business operators in kitchen and bathroom design or product supply, and specialist design personnel.

Application

This qualification is typically used to develop specialist kitchen and bathroom design skills. However, units in the qualification also support the application of design skills to other interior spaces. It is suitable for those working in the kitchens and bathroom industries, or with furnishing, joinery or cabinet making skills, in order to prepare them for providing a design service in these industries.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit may be granted towards this qualification by those who have completed LMF30409 Certificate III in Cabinet Making, LMF32009 Certificate III in Kitchen and Bathrooms (Client Services), LMF31908 Certificate III in Interior Decoration (Retail Services), LMF40408 Certificate IV in Interior Decoration, or achieved equivalent industry experience, for example, in the areas of interior decoration and design, sales and marketing of kitchen or bathroom products and designs, or manufacture of cabinets and components.

Pathways from the qualification

Further training pathways from this qualification include LMF50408 Diploma of Interior Design and Decoration.

Licensing considerations

Depending on the state and territory where work is undertaken, licensing may relate to this qualification to enable the candidate to conduct work on-site or manage implementation of designs. At the minimum, licensing requirements will usually involve construction induction training covered by the unit CPCCOHS1001A Work safely in the construction industry. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Certificate IV in Design of Kitchens, Bathrooms and Interior Spaces

The following table contains a summary of the employability skills as identified by the kitchen and bathroom industries for this qualification. This table should be interpreted in conjunction with the detailed requirements of each unit of competency packaged in this qualification. The outcomes described here are broad industry requirements that reflect skill requirements for this level.

Employability skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Communicate effectively and efficiently with colleagues, suppliers and clients • Interpret correspondence, verbal and written project briefs • Interpret work instructions, technical and conceptual information • Communicate research findings and creative ideas • Visually communicate creative concepts and direction to colleagues, suppliers and clients • Use digital forms of communication - emails, digital photos and scanned document knowledge • Produce drawings to communicate the concept • Communicate verbally and in writing with contractors and suppliers on technical issues • Confirm a brief with client • Complete standard documentation • Undertake measurements and calculations • Undertake interactive workplace communication • Present information
Teamwork	<ul style="list-style-type: none"> • Share or discuss decoration concepts and ideas with others • Work with a diverse range of cultures, trades and backgrounds • Liaise and work with suppliers • Collaborate on decoration solutions • Work with trades and craftspeople to achieve successful project outcomes • Work independently or as a team member • Demonstrate and encourage others in working cooperatively with people of different ages, gender, race or religion

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • Identify role of others in the decoration process • Undertake appropriate and effective communication with others in the design process
Problem solving	<ul style="list-style-type: none"> • Interpret and resolve kitchen and bathroom design briefs • Analyse research findings • Develop and resolve design ideas • Overcome and find solutions to constraints in project briefs • Recognise and address quality issues and problems relating to design and business activities • Solve problems in relation to the realisation of design outcomes within the client's budget • Solve problems in relation to the realisation of design outcomes that are environmentally, economically and socially sustainable • Assess and evaluate skills requirements of self and others to perform tasks • Apply knowledge of fabrics and materials to solve design problems • Assess quality of materials before using in design solutions
Initiative and enterprise	<ul style="list-style-type: none"> • Explore the potential of factors constraining or impacting on kitchen or bathroom design solutions • Initiate a particular kitchen or bathroom design direction • Realise kitchen or bathroom design solutions • Explore kitchen or bathroom design options • Manage changes to kitchen or bathroom design brief or solution • Work autonomously with the confidence to recommend selections and review projects to continually learn and improve service • Identify non-conformances to standards and take appropriate action • Identify effective ways to achieve kitchen or bathroom design outcomes • Rectify problems promptly and appropriately
Planning and organising	<ul style="list-style-type: none"> • Prepare for undertaking a kitchen or bathroom design project • Coordinate activities with other project timelines such as construction

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<ul style="list-style-type: none"> • Organise design materials and equipment • Make, confirm and alter client and supplier appointments and presentations according to workplace schedules and personnel activities • Prepare business correspondence, purchase orders and invoices in a timely manner • Prepare effective and clear specifications on time and to agreed industry standards • Collect, analyse and organise client information to arrange projects professionally and on time
Self-management	<ul style="list-style-type: none"> • Evaluate and monitor own work and the work of others • Develop individual project plans • Manage own time effectively • Establish own work schedules and take responsibility for the deliverables associated with individual projects, team ventures and client proposals • Manage own work • Monitor information in work area • Keep the work area clean and tidy at all times • Locate, interpret and apply relevant information • Monitor own work against quality standards • Understand own work activities and responsibilities • Manage work load priorities
Learning	<ul style="list-style-type: none"> • Conduct ongoing professional research in kitchen or bathroom design knowledge • Maintain professional skills • Manage own learning and professional development activities • Accept and respond to feedback, and use feedback as an opportunity to improve professional knowledge and skills • Manage own self-directed learning to continually keep up to date with available products, services and current trends • Identify shortfalls in knowledge and undertake research or training to fill gaps • Maintain a knowledge of industry standards • Assess competencies in meeting job requirements • Ask questions to expand own knowledge • Experiment with ideas and review outcomes

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY**Technology**

- Observe occupational health and safety (OHS) principles when using technology
- Research technological developments relevant to kitchen or bathroom design work
- Use computers and appropriate software to develop and realise a kitchen or bathroom design solution
- Use information technology (IT) to organise and maintain client and business data
- Work with technology safely and according to workplace standards

Packaging Rules**Packaging Rules**

To be awarded the Certificate IV in Design of Kitchens, Bathrooms and Interior Spaces, competency must be achieved in **twenty (20)** units of competency, made up of:

- **thirteen (13)** core units of competency
- **seven (7)** elective units of competency

Assessment must be conducted in accordance with the Assessment Guidelines. Units must be selected according to the rules described below

CORE UNITS

Select all **thirteen (13)** units from this list.

BSBDES401A	Generate design solutions
CPCCOHS1001A	Work safely in the construction industry
LMFDN4001B	Produce drawings from design concepts
LMFFM3013B	Measure and draw site layout for manufactured furniture products
LMFID4001A	Research, analyse and apply colour for interior spaces
LMFID4007A	Identify building materials, construction techniques and methods used in interiors

BSBDES401A	Generate design solutions
LMFID5005A	Explore and apply creative design principles to interior space
LMFKB3001A	Identify processes in kitchen and bathroom projects
LMFKB3008A	Identify cabinet construction and installation methods
LMFKB4003A	Identify and document services required to support fitted furniture designs
LMFKB4006A	Prepare quotation and contract documentation for design project
LMFKB4007A	Design ancillary residential cabinetry
MSAENV272B	Participate in environmentally sustainable work practices

ELECTIVE UNITS

Select **seven (7)** units of competency as below:

- a minimum of **two (2)** must be chosen from **either** Group A **OR** Group B specialisation units
- a maximum of **five (5)** may be selected from **Group A, B or C**

Group A - Kitchen Specialisation

LMFKB4001A	Determine spatial planning considerations for kitchen designs
LMFKB4002A	Research and recommend materials, components and finishes for kitchen designs

Group B - Bathroom Specialisation

LMFKB4004A	Determine spatial planning considerations for bathroom design
LMFKB4005A	Research and recommend materials, components and finishes for bathroom designs

Group C - General electives

LMFKB4008A	Determine layout for laundry components
LMFKB3002A	Determine requirements for installation of cabinets
LMFKB3003A	Check and measure fit of cabinets
LMFKB3007A	Provide advice on cabinet design features
LMFFDT4004A	Assess environmental impact of a design
LMFFM3011B	Produce manual and computer-aided production drawings
LMFFT4001B	Coordinate on-site installation of furnishing products
LMFFT4007B	Sample, inspect and test products to specifications
LMFFT4008B	Interpret and use workplace information
LMFFT4009B	Match furnishing style/materials to customer requirements
LMFID4008A	Assess interior light and recommend light fittings
LMFID4009A	Research architectural styles and movements
LMFID4011A	Determine occupational health and safety implications of interior effects
BSBCRT401A	Articulate, present and debate ideas
BSBCUS402A	Address customer needs
BSBDES301A	Explore the use of colour
BSBDES305A	Source and apply information on the history and theory of design
BSBMKG413A	Promote products and services
BSBSMB403A	Market the small business

LMFKB4008A	Determine layout for laundry components
BSBSMB405A	Monitor and manage small business operations
BSBSMB406A	Manage small business finances
BSBWOR204A	Use business technology
CUVDSP15B	Research and apply techniques for application to spatial design
MEM09002B	Interpret technical drawing
MEM16006A	Organise and communicate information
MSAENV472A	Implement and monitor environmentally sustainable work practices
MSAPMSUP390A	Use structured problem solving tools

LMF50202 Diploma of Furnishing Technology

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform furnishing design, manage production processes and business requirements in a furnishing manufacturing organisation.

Job roles/employment outcomes

The LMF50202 Diploma of Furnishing Technology reflects vocational outcomes for those performing furnishing design, production and management processes and procedures and involves self-directed application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for self and others.

Application

This qualification is typically used to develop a breadth, depth and complexity of skills and knowledge covering furnishing design and production planning plus initiation of alternative approaches to skills or knowledge application across a broad range of technical and/or management requirements, evaluation and co-ordination. Work would involve participation in development of strategic initiatives, as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams, including teams concerned with planning and evaluation functions and could involve group or team coordination.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF40202 Certificate IV in Furnishing Technology where competencies are common to this qualification or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF60102 Advanced Diploma of Furnishing Management or LMF60308 Advanced Diploma of Furniture Design and Technology and relevant management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • complete workplace documentation and records • use communication technologies efficiently • develop work instructions, specifications and procedures for production • demonstrate effective and appropriate communication and interpersonal skills when dealing with people from nesb • communicate with all team members • demonstrate effective and appropriate communication and interpersonal skills when dealing with clients • use most appropriate communication method given priority, cost and customer facilities • access, interpret and apply technical information • interpret and apply calculations and specifications • interpret production data
Teamwork	<ul style="list-style-type: none"> • work cooperatively with people of different ages, gender, race or religion • liaise with and provide support to other team members • work as part of a team • identify and manage performance required to meet customer needs in own work and team • manage technical processes and provide problem solving support to others
Problem-solving	<ul style="list-style-type: none"> • investigate problem causes • identify, rectify or report potential difficulties associated with manufacture of products or provision of services • identify and report environmental features, regulations, insurance requirements, legal requirements and other factors which may affect the product or service to be provided • use material and process knowledge to solve problems • identify hazards and implement control measures • determine production requirements • apply information on furniture construction and design to determine solutions to production or design problems • conduct tests and analyse results to determine and assess production requirements
Initiative and enterprise	<ul style="list-style-type: none"> • seek feedback on products, processes and procedures • gather and analyse information and apply to production processes • record information on the quality and other indicators of products

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> determine types and quantities of materials required for manufacture support achievement of efficient production processes determine and act on situations requiring further information or problem solving
Planning and organising	<ul style="list-style-type: none"> identify hazards and implement appropriate hazard control measures demonstrate time management skills source and prepare materials and resources for production identify and rectify stock shortages in advance sequence work to maximise safety and productivity interpret production requirements for furniture designs
Self-management	<ul style="list-style-type: none"> interpret and apply relevant acts and regulations keep the work area clean and tidy at all times monitor own work and work of team and identify and act on any quality issues understand own work activities manage own time to meet deadlines implement workplace procedures and instructions
Learning	<ul style="list-style-type: none"> implement learning activities as appropriate to ensure achievement of specified production requirements assess competencies in meeting job requirements be supportive, assertive and use interpersonal skills identify own training needs and seek skill development if required gather feedback to own work to assess effectiveness in meeting objectives and integrate information into own practice
Technology	<ul style="list-style-type: none"> ensure production equipment is operated and maintained according to workplace standards use computer software applications effectively work with technology safely and according to workplace standards help others use technology efficiently and safely use testing technology

Packaging Rules

Packaging Rules

To be awarded the LMF50202 Diploma of Furnishing Technology, competency must be achieved in **thirty (30)** units of competency.

- **three (3)** core units of competency
- **twenty-seven (27)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **three (3)** units from this list.

Unit code	Unit title	Prerequisites
MSAENV272B	Participate in environmentally sustainable work practices	
MSAPMOHS300A	Facilitate the implementation of OHS for a work group	
MSAPMSUP383A	Facilitate a team	

ELECTIVE UNITS

Select **twenty-seven (27)** units from Groups A, B and C as specified below.

Group A

Select a minimum of **twelve (12)** units from Group A

Unit code	Unit title	Prerequisites
LMFDN4001B	Produce drawings from design concepts	
LMFDN4002B	Produce line and component production drawings	

Unit code	Unit title	Prerequisites
LMFDN4003B	Produce patterns and/or templates	
LMFDN4004B	Design, construct and test jigs	
LMFDN4005B	Work within a furniture design team	
LMFFT4001B	Coordinate on-site installation of furnishing products	
LMFFT4002B	Customise stock lines	
LMFFT4003B	Organise production processes	
LMFFT4004B	Establish and monitor production inventory requirements	
LMFFT4005B	Install and commission CNC software	
LMFFT4006B	Construct prototypes and samples	
LMFFT4007B	Sample, inspect and test products to specifications	
LMFFT4008B	Interpret and use workplace information	
LMFFT4009B	Match furnishing style/materials to customer	

Unit code	Unit title	Prerequisites
	requirements	
LMFFT4010B	Identify and calculate production costs	
LMFFT4011B	Purchase materials and consumables	
LMFFT4012B	Prepare a tender submission	
LMFPP4001B	Design and conduct ornamental frames	
LMFPP4002B	Determine and apply gilding techniques	

Group B

Select a minimum of **nine (9)** units from Group B

Unit code	Unit title	Prerequisites
LMFDN5001B	Generate and transfer complex computer-aided drawings and specifications	
LMFDN5006B	Manage furniture design	
LMFFDT4015A	Research furniture styles and movements	
LMFFT5001B	Evaluate and select production materials and equipment	

Unit code	Unit title	Prerequisites
LMFFT5001B	Evaluate and select production materials and equipment	
LMFFT5002B	Establish and develop production processes and area layout	
LMFFT5003B	Manage installation and commissioning of equipment	
LMFFT5004B	Develop and document procedures and specifications	
LMFFT5005B	Organise enterprise maintenance programs	
LMFFT5006B	Plan production	
LMFFT5010B	Optimise CNC operations	
LMFFT5011B	Develop, trial and evaluate prototypes	
LMFFT5012B	Determine production feasibility of designs	
LMFFT5013B	Develop products and related processes	
LMFFT5014B	Establish and monitor business	

Unit code	Unit title	Prerequisites
	information systems	
LMFFT5015B	Establish and implement contracts for external goods or services	
LMFFT5016B	Establish customer contracts	
MSAENV472B	Implement and monitor environmentally sustainable work practices	

Group C

Up to **five (5)** relevant units can be chosen from other units not already selected from Groups A and B, or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate IV level (maximum 1 unit), Diploma level or Advanced Diploma level (maximum 1 unit).

Units selected from other Training Packages and accredited courses via Group C must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF50308 Diploma of Stained Glass and Lead Lighting

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform advanced design manufacture, repair and installation of stained glass and lead lighting including heritage conservation.

Job roles/employment outcomes

The LMF50308 Diploma of Stained Glass and Lead Lighting reflects vocational outcomes for those performing design and manufacture of stained glass and lead lighting job roles including heritage conservation. Work involves self-directed application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for self and others.

Application

This qualification is typically used to develop advanced skills and knowledge in stained glass and lead lighting design and heritage conservation plus initiation of alternative approaches to skills or knowledge application across a broad range of technical and/or management requirements, evaluation and co-ordination. Work would involve participation in development of strategic initiatives, as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams, including teams concerned with planning and evaluation functions and could involve group or team coordination.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF30602 Certificate III in Glass and Glazing with relevant units included in this qualification or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include Furnishing Advanced Diploma and relevant management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • organise and understand information related to work orders, plans and safety procedures • organise and understand detailed technical information related to the materials and the products used in and related to stained glass and lead lighting • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with other workers and customers, and the reporting of work outcomes and problems • maintain records related to product and materials quality
Teamwork	<ul style="list-style-type: none"> • work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
Problem-solving	<ul style="list-style-type: none"> • use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use • use checking and inspection techniques to ensure instruments comply with specifications and that instances of non-compliance are remedied • identify, anticipate and respond to faults in glass or other materials • identify, anticipate and respond to the problems related to glass and other material properties • identify and analyse faults in stained glass and lead lighting • select and apply the most appropriate stained glass and lead lighting maintenance and repair techniques • identify, anticipate and respond to the impact of the material properties on the product
Initiative and enterprise	<ul style="list-style-type: none"> • recognise and respond to circumstances outside instructions or personal competence
Planning and organising	<ul style="list-style-type: none"> • plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage during the production cycle • use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
Self-management	<ul style="list-style-type: none"> • clarify and confirm specified work instructions • plan work within task parameters • apply systematic and effective time management • accept responsibility for tasks

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • set, monitor and satisfy personal work goals
Learning	<ul style="list-style-type: none"> • satisfy the competency requirements for the job • maintain current knowledge of stained glass and lead lighting tools and production materials • maintain current knowledge of stained glass and lead lighting processes and techniques • seek learning opportunities
Technology	<ul style="list-style-type: none"> • use the workplace technology related to the selection, preparation and use of stained glass and lead lighting products and materials including hand and power tools, calculators, measuring devices and technical support systems

Packaging Rules

Packaging Rules

To be awarded the LMF50308 Diploma of Stained Glass and Lead Lighting, competency must be achieved in **twenty-five (25)** units of competency.

- **eleven (11)** core units of competency
- **fourteen (14)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **eleven (11)** units from this list.

Unit code	Unit title	Prerequisites
HLTFA301B	Apply First Aid	
LMFGG2001B	Use glass and glazing sector hand and power tools	
LMFGG3002B	Assess glass and glazing requirements	
LMFGG3001B	Move, store and handle glass	
LMFGG3013B	Construct and repair leadlight and stained glass panels	

Unit code	Unit title	Prerequisites
LMFSL2001A	Assemble lead light and stained glass components	
LMFSL3004A	Protect stained glass and lead lighting	
LMFSL3005A	Fabricate and install residential lead light and stained glass windows and doors	
LMFSL3006A	Prepare and install architectural engineered stained glass and lead lighting	
MEM05003B	Perform soft soldering	
MSAENV272B	Participate in environmentally sustainable work practices	

ELECTIVE UNITS

Select **fourteen (14)** units from Groups A, B, C and D as specified below with a minimum of **nine (9)** units selected from Groups A, B and C

Group A

A minimum of **one (1)** unit must be selected from this list:

Unit code	Unit title	Prerequisites
LMFSL5001A	Assess conservation requirements	
LMFSL5002A	Remove heritage lead light and stained glass	
LMFSL5003A	Conserve heritage lead light and stained glass	
LMFSL5004A	Install heritage lead light and stained glass	
LMFSL5005A	Apply innovation in contemporary lead light and	

Unit code	Unit title	Prerequisites
	stained glass	

Group B

A minimum of **four (4)** units must be selected from this list:

Unit code	Unit title	Prerequisites
CULMS010B	Contribute to the preservation of cultural material	
CUVCOR04B	Originate concept for own work and conduct critical discourse	
CUVCOR09B	Select and apply drawing techniques and media to represent and communicate the concept	
CUVDSP07B	Research and apply techniques for graphic design	
CUVDSP15B	Research and apply techniques for application to spatial design	
CUVICS04B	Originate and develop a concept	
CUVVSP02B	Research and experiment with techniques to produce calligraphy	
LMFDN4001B	Produce drawings from design concepts	
LMFDN4002B	Produce line and component production drawings	
LMFDN4003B	Produce patterns and/or templates	

Unit code	Unit title	Prerequisites
LMFDN5001B	Generate and transfer complex computer-aided drawings and specifications	

Group C

A minimum of **four (4)** units must be selected from this list:

Unit code	Unit title	Prerequisites
BSBSMB401A	Establish legal and risk management requirements of small business	
BSBSMB402A	Plan small business finances	
BSBSMB403A	Market the small business	
BSBSMB404A	Undertake small business planning	
BSBSMB405A	Monitor and manage small business operations	
BSBSMB406A	Manage small business finances	
BSBSMB407A	Manage a small team	
MSAENV472B	Implement and monitor environmentally sustainable work practices	

Group D

Up to **five (5)** relevant units may be chosen from units in Groups A, B and C not already selected, or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Diploma level or Certificate IV level (maximum 2 units) or Advanced Diploma level (maximum 3 units).

Units selected from other Training Packages and accredited courses via Group D must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF50408 Diploma of Interior Design and Decoration

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform design and decoration advice for building interiors. Design and decoration at this level covers the development of complete decorative schemes for the effective use of residential and commercial or institutional interior spaces, working with a client brief and within project parameters. It may also include specialist design areas such as facilities for people with disabilities and the aged.

Job roles/employment outcomes

The LMF50408 Diploma of Interior Design and Decoration reflects vocational outcomes include:

- self employment as an interior decorator, colour consultant or interior stylist
- in-house Interior designer or decorator for design and decoration consultancies, furniture, furnishings and fabric suppliers, furnishing departments of retail stores or shop fitters.

Work involves self-directed application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for self and others.

Application

This qualification is typically used to develop a breadth, depth and complexity of skills and knowledge covering furnishings, finishes and aesthetic presentation to meet the purpose, efficiency and comfort of the space and encourage the principles of environmental sustainability. It covers a detailed understanding of the application and effect of colour and pattern in interior space and the application of historic furnishing styles and their relationship to architectural periods and heritage projects.

This qualification covers the skills required to provide a full range of decoration services, consultation and design advice including:

- researching and analysing the client's goals and requirements
- planning, arranging and styling the space, and preparing detailed client presentations
- selecting and specifying colour schemes, furniture, fabrics and fixtures, including layouts and detailed specifications
- preparing design documentation for specialty floor coverings, fabrics and wall finishes
- working with builders, architects and service contractors to advise on changes to the interior structure
- producing documentation for shop fitters, cabinet makers, furniture suppliers and materials suppliers
- preparing documentation for power and communications locations, reflected ceiling plans and lighting designs that reflect an understanding of basic building protocols
- providing contract documentation for the pricing, procurement and installation of materials and furniture
- organising the purchasing of materials, accessories, artwork and furnishings
- contracting and supervision of the trades people required to implement a project.

Work would involve participation in development of strategic initiatives, as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams, including teams concerned with planning and evaluation functions and could involve group or team coordination.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF40408 Certificate IV in Interior Decoration or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF60208 Advanced Diploma of Interior Design and relevant management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • communicate effectively and efficiently with colleagues, suppliers, clients and others involved in the decoration or design project, using a variety of communication methods • interpret decoration or design briefs • interpret technical and conceptual information • conduct research to inform project outcomes • communicate and sell decoration or design ideas and concepts using a variety of presentation methods • produce detailed technical drawings to industry standard • complete documentation relating to the project • undertake measurements and calculations and document in specification schedule • interpret client needs and documentation including client briefs, quotations, fee schedules, proposal documents, product/finishes schedules and architectural drawings • negotiate a brief with the client • manage contracts
Teamwork	<ul style="list-style-type: none"> • collaborate on design and decoration concepts and ideas with others • demonstrate and encourage others in working cooperatively with people of different ages, gender, race or religion • undertake appropriate and effective communication with others in the design and decoration process • provide constructive and meaningful feedback on design and decoration work to colleagues • provide practical decoration or design and business support to managers and the design team • work within a multi-disciplined project team, construction team to meet time frames, budgets and expectations
Problem-solving	<ul style="list-style-type: none"> • interpret and resolve decoration or design briefs which meet client needs and are achieved within the parameters of the project • analyse and apply research findings into decoration or design solutions • develop and resolve ideas for complex decoration or design projects • recognise and address quality issues and problems relating to design and decoration and business activities • solve problems in relation to the realisation of desired decoration outcomes that are environmentally, economically

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<ul style="list-style-type: none"> and socially sustainable • use expertise to provide problem solving advice to the design and decoration team • identify and address unexpected problems, hazards, time delays and structural implications as they arise • evaluate design solutions for best fit
Initiative and enterprise	<ul style="list-style-type: none"> • anticipate and address problems, hazards, time delays and structural implications • initiate a design and decoration direction and options for the project • provide leadership in design and decoration and manage changes to brief or solution • identify and address non-conformances • identify effective ways to achieve decoration outcomes • rectify problems promptly and appropriately • develop original design concepts • apply continual improvement processes to design and decoration service
Planning and organising	<ul style="list-style-type: none"> • develop project schedules on time, to agreed industry standards and in coordination with other project timelines • make, confirm and alter client and supplier appointments and presentations according to workplace schedules and personnel activities • prepare business correspondence, purchase orders and invoices in a timely manner • collect, analyse and organise client information to arrange projects professionally and on time • prepare project proposals with all information to enable clients to make efficient and informed choices • arrange and oversee trades people in the undertaking of work according to project requirements • plan work requirements for self and others as required • monitor quality outcomes
Self-management	<ul style="list-style-type: none"> • evaluate and monitor work outcomes against work schedule and quality standards • manage own time and work load priorities effectively • monitor information in work area • keep the work area clean and tidy at all times • locate, interpret and apply relevant information • take responsibility for project work
Learning	<ul style="list-style-type: none"> • conduct ongoing professional research in design and decoration

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	<p>knowledge</p> <ul style="list-style-type: none"> • maintain professional skills and industry contacts • manage own learning and professional development activities • accept and respond to feedback, and use feedback as an opportunity to improve professional knowledge and skills • identify shortfalls in knowledge and undertake research or training to fill gaps • assess competencies in meeting job requirements • ask questions to expand own knowledge • experiment with design and decoration ideas and review outcomes
Technology	<ul style="list-style-type: none"> • observe OHS principles when using technology • research technological developments relevant to design and decoration work • use computers and appropriate software to develop and realise a decoration or design solution • use technology to organise and maintain client and business data • work with technology safely and according to workplace standards

Packaging Rules**Packaging Rules**

To be awarded the LMF50408 Diploma of Interior Design and Decoration, competency must be achieved in **twenty nine (29)** units of competency

- **ten (10)** core units of competency
- **nineteen (19)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **ten (10)** units from this list.

Unit code	Unit title	Prerequisites
BSBDES302A	Explore and apply the creative design	

Unit code	Unit title	Prerequisites
	process to 2D forms	
BSBDES303A	Explore and apply the creative design process to 3D forms	
BSBDES502A	Establish, negotiate and refine a design brief	
CUVCOR09B	Select and apply drawing techniques and media to represent and communicate the concept	
CUVCRS04B	Produce technical drawings	
LMFID4001A	Research, analyse and apply colour for interior spaces	
LMFID4002A	Decorate residential interiors	
LMFID4011A	Determine occupational health and safety implications of interior effects	
LMFID5003A	Evaluate site for interior design brief	
MSAENV272B	Participate in environmentally sustainable work practices	

ELECTIVE UNITS

Select **nineteen (19)** units from Groups A, B, C and D as specified below.

Group A

Select **one (1)** unit from Group A

Unit code	Unit title	Prerequisites
LMFID5001A	Design residential interiors	
LMFID5002A	Develop a decoration proposal for a complex site	

Group B

Select a minimum of **five (5)** units from Group B

Unit code	Unit title	Prerequisites
CPCCB4037A	Prepare drawing for heritage works	
BSBCRT501A	Originate and develop concepts	
BSBDES304A	Source and apply design industry knowledge	
BSBPMG510A	Manage projects	
CUFANM303A	Create digital 3D models	
CUFDIG507A	Design digital simulations	
LMFFDT5002A	Apply resources sustainably	
LMFFDT5004A	Develop self as a furniture designer	

Unit code	Unit title	Prerequisites
LMFID5004A	Specify structural elements, systems and services for interior spaces	
LMFID5005A	Explore and apply creative design methodology to interior space	
LMFID5006A	Design interior lighting	
LMFID5007A	Decorate for events	
LMFID5008A	Design for people with disabilities and the elderly	
LMFID5009A	Research and recommend colour and applied finishes	
LMFID5010A	Provide interior styling service	
LMFID5011A	Specify soft furnishings for complete interior solution	
LMFID5012A	Research and recommend artwork	
LMFID5013A	Design for small to medium scale commercial or institutional interiors	
LMFID5014A	Use CAD	

Unit code	Unit title	Prerequisites
	applications to complete models and documentation for interior design projects	
LMFID5015A	Decorate interiors for restoration projects	
SIRRMER009A	Produce perspective drawings, plans and elevations	
SIRRMER020A	Create and implement exhibition space	

Group C

Select a minimum of **eight (8)** units from Group C

Unit code	Unit title	Prerequisites
BSBCRT401A	Articulate, present and debate ideas	
BSBCRT402A	Collaborate in a creative process	
BSBDES301A	Explore the use of colour	
BSBDES305A	Source and apply information on the history and theory of design	
BSBDES401A	Generate design solutions	

Unit code	Unit title	Prerequisites
BSBDES403A	Develop and extend design skills and practice	
BSBMGT402A	Implement operational plan	
BSBSMB405A	Monitor and manage small business operations	
BSBWOR204A	Use business technology	
CUFDIG303A	Produce and prepare photo images	
CUFDIG304A	Create visual design components	
CUVCOR08B	Produce drawings to represent and communicate the concept	
CUVCRS03B	Produce computer-aided drawings	
CUVDSP11B	Research and apply techniques for illustrative work	
CUVDSP15B	Research and apply techniques for application to spatial design	
LMFFDT4012A	Produce ideation drawings	
LMFFDT4015A	Research furniture styles and movements	

Unit code	Unit title	Prerequisites
LMFID3002A	Source and specify decoration products	
LMFID4003A	Prepare a materials board for client presentation	
LMFID4004A	Research and recommend furniture and accessories	
LMFID4005A	Research and recommend soft furnishings for interiors	
LMFID4006A	Research and recommend hard materials and finishes for interiors	
LMFID4007A	Identify materials, construction techniques and methods used in building interiors	
LMFID4008A	Assess interior light and recommend light fittings	
LMFID4009A	Research architectural styles and movements	
LMFID4010A	Research interior decoration and design influences	
MEM16006A	Organise and communicate information	

Unit code	Unit title	Prerequisites
MSAENV472B	Implement and monitor environmentally sustainable work practices	

Group D

Up to **five (5)** relevant units can be chosen from other units not already selected from Groups A, B and C, or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate IV level (maximum 2 units), Diploma level or Advanced Diploma level (maximum 2 units).

Units selected from other Training Packages and accredited courses via Group D must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF50508 Diploma of Furniture Design and Technology

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required where the design of furniture and the application of the design into a finished furniture product is the central focus. This qualification is structured to reflect two primary occupational outcomes in the areas of fine furniture making - with a focus on skills required to design and produce individual fine furniture for display or custom production and furniture design - with a focus on skills required to design furniture for volume production.

Job roles/employment outcomes

The LMF50508 Diploma of Furniture Design and Technology reflects vocational outcomes for those performing design of furniture and has two streams that should be selected on the basis of required occupational outcome.

- Stream 1: Fine Furniture Making - units for this stream are included in Groups A and C
- Stream 2: Furniture Design - units for this stream are included in Groups A and D

The selection of units for each of each stream is determined by the packaging rules below. Work involves self-directed application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for self and others.

Application

This qualification is typically used to develop a breadth, depth and complexity of skills and knowledge covering furnishing design and technology plus initiation of alternative approaches to skills or knowledge application across a broad range of technical and/or management requirements, evaluation and co-ordination. Work would involve participation in development of strategic initiatives, as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams, including teams concerned with planning and evaluation functions and could involve group or team coordination.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed the LMF40508 Certificate IV in Furniture Design and Technology or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include LMF60308 Advanced Diploma of Furniture Design and Technology and relevant management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • communicate effectively and efficiently with colleagues, suppliers, clients and others involved in the design project, using a variety of communication methods • interpret design briefs • interpret technical and conceptual information • conduct research to inform project outcomes • communicate and sell design ideas and concepts using a variety of presentation methods • produce detailed technical drawings to industry standard • complete documentation relating to the project • undertake measurements and calculations and document in specification schedule • interpret client needs and documentation such as client briefs, quotations, fee schedules, proposal documents, product finishes, schedules and drawings • discuss design ideas
Teamwork	<ul style="list-style-type: none"> • collaborate on design concepts and ideas with others • demonstrate and encourage others in working cooperatively with people of different ages, gender, race or religion • undertake appropriate and effective communication with others in the design or manufacturing process • provide constructive and meaningful feedback on design work to colleagues • provide practical support to team members • work within a multi-disciplined project team
Problem-solving	<ul style="list-style-type: none"> • interpret and resolve design ideas • analyse and apply research findings into design solutions • recognise and address quality issues and problems relating to designs • solve problems in relation to the realisation of outcomes that are environmentally, economically and socially sustainable • use expertise to provide problem solving advice • identify and address unexpected problems, hazards, time delays and structural implications as they arise • evaluate design solutions for best fit
Initiative and enterprise	<ul style="list-style-type: none"> • anticipate and address problems, hazards, time delays and structural implications • initiate design direction and options • provide leadership in design and manage changes to brief or solution

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • identify and address non-conformances • identify effective ways to achieve outcomes • rectify problems promptly and appropriately • develop original design concepts
Planning and organising	<ul style="list-style-type: none"> • prepare business correspondence, purchase orders and invoices in a timely manner • collect, analyse and organise client information • prepare project proposals with all information to enable clients to make efficient and informed choices • arrange and oversee trades people in the undertaking of work according to project requirements • plan work requirements for self and others as required • monitor quality outcomes
Self-management	<ul style="list-style-type: none"> • evaluate and monitor work outcomes against work schedule and quality standards • manage own time and work load priorities effectively • monitor information in work area • keep the work area clean and tidy at all times • locate, interpret and apply relevant information • take responsibility for project work
Learning	<ul style="list-style-type: none"> • conduct ongoing professional research in design and technology knowledge • maintain professional skills and industry contacts • manage own learning and professional development activities • accept and respond to feedback, and use feedback as an opportunity to improve professional knowledge and skills • identify shortfalls in knowledge and undertake research or training to fill gaps • assess competencies in meeting job requirements • ask questions to expand own knowledge • experiment with design ideas and review outcomes
Technology	<ul style="list-style-type: none"> • observe OHS principles when using technology • research technological developments relevant to design and technology work • use computers and appropriate software to develop design solutions • use technology to organise and maintain client and business data • work with technology safely and according to workplace standards

Packaging Rules

Packaging Rules

To be awarded the LMF50508 Diploma of Furniture Design and Technology, competency must be achieved in **twenty-six (26)** units of competency.

- **eight (8)** core units of competency
- **eighteen (18)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **eight (8)** units from this list.

Unit code	Unit title	Prerequisites
BSBDES401A	Generate design solutions	
LMFFDT4007A	Establish design brief	
LMFFDT4012A	Produce ideation drawings	
LMFFDT4014A	Research and select furniture materials and technology	
LMFFDT4015A	Research furniture styles and movements	
LMFFDT5004A	Develop self as a furniture designer	
LMFFDT5013A	Evaluate furniture design proposals and concepts	
MSAENV272B	Participate in environmentally sustainable work	

Unit code	Unit title	Prerequisites
	practices	

ELECTIVE UNITS

Select **eighteen (18)** units from Groups A, B, C and D as specified below.

Group A

Select **one (1)** unit from Group A

Unit code	Unit title	Prerequisites
Stream 1: Fine Furniture Making		
LMFFDT4006A	Establish and maintain a safe furniture making work environment	
Stream 2: Furniture Design		
LMFFDT4008A	Determine occupational health and safety implications of designs	

Group B

Select a minimum of **four (4)** units from Group B, including at least **two (2)** units coded LMF*****

Unit code	Unit title	Prerequisites
BSBDES502A	Establish, negotiate and refine a design brief	
BSBMKG501B	Evaluate marketing opportunities	
CUFANM303A	Create digital 3D models	

Unit code	Unit title	Prerequisites
LMFDN5001B	Generate and transfer complex computer-aided drawings and specifications	
LMFDN5006A	Manage furniture design	
LMFFDT5001A	Apply ergonomics, anthropometrics and proxemic considerations to a product	
LMFFDT5002A	Apply resources sustainably	
LMFFDT5003A	Assess and resolve technical integrity of a design	
LMFFDT5005A	Construct custom furniture using advanced techniques	
LMFFDT5007A	Design a batch or limited production item of furniture	
LMFFDT5008A	Design a furniture product using high volume technology services (HVTS) in production	
LMFFDT5009A	Design a one-off item of furniture	
LMFFDT5010A	Research and recommend alternative manufacturing processes	
LMFFDT5011A	Research and recommend machine technology	
LMFFT5001B	Evaluate and select production materials and equipment for furniture production	
LMFFT5004B	Develop and document procedures and	

Unit code	Unit title	Prerequisites
	specifications	
LMFFT5011B	Develop, trial and evaluate prototypes	
LMFFT5012B	Determine production feasibility of designs	
MSACMT230A	Apply cost factors to work practices	
MSACMT450A	Undertake process capability improvements	MSACMT452A
MSACMT452A	Apply statistics to processes in manufacturing	
MSACMT631A	Undertake value analysis of product costs in terms of customer requirements	MSACMT230A

Group C

Select a minimum of **eight (8)** units from Group C **OR** Group D. A minimum of **five (5)** units in each group must be units coded LMF*****

Unit code	Unit title	Prerequisites
Stream 1: Fine Furniture Making		
BSBDES301A	Explore the use of colour	
BSBPMG510A	Manage projects	
BSBSMB403A	Market the small business	
BSBSMB404A	Undertake small business planning	
CUFDIG303A	Produce and prepare photo images	

Unit code	Unit title	Prerequisites
CUVCOR09B	Select and apply drawing techniques and media to represent and communicate the concept	
CUVCRS03B	Produce computer-aided drawings	
CUVCRS04B	Produce technical drawings	
LMFFDT4001A	Apply finishing techniques to custom furniture	
LMFFDT4002A	Assemble custom furniture	
LMFFDT4005A	Construct and evaluate furniture prototypes and samples	
LMFFDT4009A	Prepare and present furniture design information	
LMFFDT4010A	Produce and evaluate developmental furniture models to scale	
LMFFDT4011A	Set up, operate and maintain basic static woodworking machines	
LMFFDT4015A	Research furniture styles and movements	
LMFFDT4016A	Select, use and	

Unit code	Unit title	Prerequisites
	maintain hand tools for the creation of custom furniture	
LMFFDT4017A	Set up and operate a wood turning lathe to produce off-centre work	
LMFFDT4018A	Produce templates and jigs for custom made furniture	
LMFFM4005A	Hand carve wood to custom design	
LMFFM4006A	Construct joints for custom furniture	
LMFFM4007A	Produce curved and shaped components for custom furniture	
LMFFM4008A	Produce timber veneered components for custom furniture	
LMFFT4010B	Identify and calculate production costs	
LMFFT4011A	Purchase materials and consumables for furniture production	

Group D

Unit code	Unit title	Prerequisites
Stream 2: Furniture design		
BSBCRT401A	Articulate, present and debate ideas	

Unit code	Unit title	Prerequisites
BSBCRT402A	Collaborate in a creative process	
BSBCRT403A	Explore the history and social impact of creativity	
BSBCRT501A	Originate and develop concepts	
BSBDES301A	Explore the use of colour	
BSBDES303A	Explore and apply the creative design process to 3D forms	
BSBDES305A	Source and apply information on the history and theory of design	
BSBDES403A	Develop and extend design skills and practice	
BSBPMG510A	Manage projects	
BSBSMB403A	Market the small business	
BSBSMB404A	Undertake small business planning	
BSBSMB407A	Manage a small team	
CUFDIG303A	Produce and prepare photo images	
CUFDIG304A	Create visual design components	
CUVCOR09B	Select and apply drawing techniques and media to represent and communicate the concept	
CUVCRS03B	Produce computer-aided drawings	
CUVCRS04B	Produce technical drawings	

Unit code	Unit title	Prerequisites
LMFFDT4003A	Assess and record the lifecycle of a product	
LMFFDT4004A	Assess environmental impact of a design	
LMFFDT4005A	Construct and evaluate furniture prototypes and samples	
LMFFDT4009A	Prepare and present furniture design information	
LMFFDT4013A	Research and select furniture finishes	
LMFFT4010B	Identify and calculate production costs	
MEM15001B	Perform basic statistical quality control	
MEM16006A	Organise and communicate information	
MEM16007A	Work with others in a manufacturing, engineering or related environment	
MEM16008A	Interact with computing technology	
MEM16013A	Operate in a self directed team	MEM16007A
MEM30001A	Use computer aided drafting systems to produce basic engineering drawings	MEM16006A MEM16008A
MEM30004A	Use CAD to create and display 3D models	MEM16008A MEM30001A
MEM30024A	Participate in quality assurance techniques	MEM15001B
MSACMT230A	Apply cost factors to work	

Unit code	Unit title	Prerequisites
	practices	
MSACMT430A	Improve cost factors in work practices	
MSAENV472B	Implement and monitor environmentally sustainable work practices	

Group E

Up to **five (5)** relevant units can be chosen from other units not already selected from Groups B, C and D, or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Certificate IV level (maximum 2 units), Diploma level or Advanced Diploma level (maximum 2 units).

Units selected from other Training Packages and accredited courses via Group E must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF60102 Advanced Diploma of Furnishing Management

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to perform management functions in a range of in furnishing production, planning and quality control environments.

Job roles/employment outcomes

The LMF60102 Advanced Diploma of Furnishing Management reflects vocational outcomes for those performing furnishing management job roles using a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specified functions. Contribution to the development of a broad plan, budget or strategy is involved and accountability and responsibility for self and others in achieving outcomes is involved.

Application

This qualification is typically used to develop a breadth, depth and complexity of skills and knowledge in furnishing management involving analysis, diagnosis, design, planning, execution and evaluation across a broad range of technical and/or management functions including development of new criteria or applications or knowledge or procedures.

Pathways into the qualification

Entry into this qualification should be through completion of the LMF50202 Diploma of Furnishing Technology or formal recognition of equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include relevant higher education programs in business, commerce or manufacturing technology and relevant management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • use information and communication technology to gather and interpret data related to the development of furnishing products and designs • research process and products using a range of information sources • develop design or production specifications in consultation with client or design team • make calculations to determine production specifications • communicate with clients, design team and commercial producers • complete documentation and maintain records • negotiate design and production with clients
Teamwork	<ul style="list-style-type: none"> • exchange information with clients and design team • provide support to production team • gather and provide feedback on design and production processes
Problem-solving	<ul style="list-style-type: none"> • analyse suitability of designs for commercial product development • analyse and apply design influences to determine trends and opportunities • create commercial furniture designs • evaluate information to guide commercial development and processes • make modifications to designs or techniques based on client requirements or resource issues • identify and address production problems
Initiative and enterprise	<ul style="list-style-type: none"> • develop new commercial textile designs • identify design opportunities • sell ideas to clients • determine promotional opportunities for work
Planning and organising	<ul style="list-style-type: none"> • plan processes to achieve desired outcomes within agreed time-frames • ensure work station and equipment are set up so that work requirements are met • manage design and production processes • produce commercial furniture design samples • develop and implement contingency plans when responding to incidents and problems
Self-management	<ul style="list-style-type: none"> • monitor own work against workplace, industry and quality

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	standards <ul style="list-style-type: none"> • adjust processes or techniques as required according to variations in requirements • implement and apply OHS practices in the workplace
Learning	<ul style="list-style-type: none"> • assess own skill requirements and seek further development if required • develop or adjust processes based on new information • maintain knowledge and skill in processes and industry
Technology	<ul style="list-style-type: none"> • use information and communication technology to acquire, manage and share data • use computer-aided design technology in the development of furniture designs • use furniture production machinery and equipment in the production of samples

Packaging Rules**Packaging Rules**

To be awarded the LMF60102 Advanced Diploma of Furnishing Management, competency must be achieved in **eight (8)** units of competency.

- **one (1)** core unit of competency
- **seven (7)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete the following unit

Unit code	Unit title	Prerequisites
LMFFT6001B	Research and evaluate materials, products and processes	

ELECTIVE UNITS

Select **seven (7)** units from Groups A and B as specified below.

Group A

Select a minimum of **four (4)** units from Group A

Unit code	Unit title	Prerequisites
BSBMGT616A	Develop and implement strategic plans	
BSBMGT617A	Develop and implement a business plan	
BSBMGT605B	Provide leadership across the organisation	
BSBINM601A	Manage knowledge and information	
BSBMGT608B	Manage innovation and continuous improvement	
BSBR501A	Manage risk	
MSAENV672B	Develop workplace policy and procedures for sustainability	

Group B

Up to **three (3)** relevant units may be chosen from furnishing technology specialist units available in the Diploma of Furnishing Technology not already achieved, or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Advanced Diploma level.

Units selected from other Training Packages and accredited courses via Group B must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF60208 Advanced Diploma of Interior Design

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required for creative and technical solutions for built interior environments. Interior design at this level covers the planning and detailing of complex residential, commercial and institutional design projects with an emphasis on space creation, space planning and the factors that affect peoples' responses to living and working environments. It may also include specialist design areas such as facilities for people with disabilities, institutional design, exhibitions, the aged, and adaptive re-use projects.

Job roles/employment outcomes

The LMF60208 Advanced Diploma of Interior Design reflects vocational outcomes including interior designers for interior design and architectural practices, self employed design consultants, design project administrators and design managers. Work involves using a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specified functions. Accountability and responsibility for self and others in achieving outcomes is involved.

Application

This qualification is typically used to develop a breadth, depth and complexity of skills and knowledge for interior design processes which follow a systematic and coordinated methodology, including research, analysis and integration of knowledge into the creative process, and knowledge of the principles of interior design and building technologies. Designs must meet the purpose, efficiency, comfort, safety and aesthetic requirements of interior spaces, adhere to regulatory requirements and encourage the principles of environmental sustainability.

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed the LMF50408 Diploma of Interior Design and Decoration.

Pathways from the qualification

Further training pathways from this qualification may include relevant higher education programs and management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • communicate effectively and efficiently with colleagues, suppliers, clients and others involved in the design project, using a variety of communication methods • interpret and negotiate design briefs • analyse technical and conceptual information • conduct research to inform project outcomes • communicate and sell design ideas and concepts using a variety of presentation methods • produce detailed technical drawings to industry standard • complete documentation relating to the project • undertake measurements and calculations and document in specification schedule • interpret client needs and documentation including client briefs, quotations, fee schedules, proposal documents, product/finishes schedules and architectural drawings • interact with and negotiate with industry representatives
Teamwork	<ul style="list-style-type: none"> • provide leadership in developing design concepts and ideas for the design team • demonstrate and encourage others in working cooperatively with people of different ages, gender, race or religion • undertake appropriate and effective communication with others in the design process • provide others with constructive and meaningful feedback • lead a multi-disciplined project team to meet time frames, budgets and expectations
Problem-solving	<ul style="list-style-type: none"> • interpret and resolve design briefs which meet client needs and are achieved within the parameters of the project • analyse and apply research findings into design solutions • develop and resolve ideas for a range of design challenges • recognise and address quality issues and problems relating to design and business activities • solve problems in relation to the realisation of desired design outcomes that are environmentally, economically and socially sustainable • use expertise to provide problem solving advice • identify and address unexpected problems, hazards, time delays and structural implications as they arise • evaluate design solutions for best fit • evaluate information to guide design development and processes

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • assess commercial viability of designs
Initiative and enterprise	<ul style="list-style-type: none"> • anticipate and address problems, hazards, time delays and structural implications • initiate a design direction and options for the project • provide leadership in design and manage project changes • identify and address non-conformances • identify effective ways to achieve design outcomes • rectify problems promptly and appropriately • develop original design concepts • apply continual improvement processes to design service
Planning and organising	<ul style="list-style-type: none"> • develop project schedules on time, to agreed industry standards and in coordination with other project timelines • make, confirm and alter client and supplier appointments according to workplace schedules and personnel activities • prepare business correspondence, purchase orders and invoices in a timely manner • collect, analyse and organise client information to arrange projects professionally and on time • prepare project proposals with all information to enable clients to make efficient and informed choices • arrange and oversee trades people in the undertaking of work according to project requirements • plan work requirements for self and others as required • monitor quality outcomes
Self-management	<ul style="list-style-type: none"> • evaluate and monitor work outcomes against work schedule and quality standards • manage own time and work load priorities effectively • monitor information in work area • keep the work area clean and tidy at all times • locate, interpret and apply relevant information • provide leadership for project work
Learning	<ul style="list-style-type: none"> • conduct ongoing professional research in design knowledge • maintain professional skills and industry contacts • manage own learning and professional development activities • accept and respond to feedback, and use feedback as an opportunity to improve professional knowledge and skills • identify shortfalls in knowledge and undertake research or training to fill gaps • assess competencies in meeting job requirements • ask questions to expand own knowledge • experiment with design ideas and review outcomes

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Technology	<ul style="list-style-type: none"> • observe OHS principles when using technology • research technological developments relevant to design work • use computers and appropriate software to develop and realise a design solution • use technology to organise and maintain client and business data • work with technology safely and according to workplace standards
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Packaging Rules**Packaging Rules**

To be awarded the LMF60208 Advanced Diploma of Interior Design, competency must be achieved in **thirty-nine (39)** units of competency.

- **fourteen (14)** core units of competency
- **twenty-five (25)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **fourteen (14)** units from this list.

Unit code	Unit title	Prerequisites
BSBDES302A	Explore and apply the creative design process to 2D forms	
BSBDES303A	Explore and apply the creative design process to 3D forms	
BSBDES502A	Establish, negotiate and refine a design brief	

Unit code	Unit title	Prerequisites
BSBDES601A	Manage design realisation	
CUVCOR09B	Select and apply drawing techniques and media to represent and communicate the concept	
CUVCRS04B	Produce technical drawings	
LMFID4001A	Research, analyse and apply colour for interior spaces	
LMFID4011A	Determine occupational health and safety implications of interior effects	
LMFID5001A	Design residential interiors	
LMFID5003A	Evaluate site for interior design brief	
LMFID5013A	Design for small to medium scale commercial or institutional interiors	
LMFID6001A	Resolve complex spatial problems through modelling	
LMFID6002A	Apply 3-D visualisation techniques to represent interior designs	

Unit code	Unit title	Prerequisites
MSAENV272B	Participate in environmentally sustainable work practices	

ELECTIVE UNITS

Select **twenty-five (25)** units from Groups A, B, C and D as specified below.

Group A

Select a minimum of **five (5)** units from Group A.

Unit code	Unit title	Prerequisites
BSBDES602A	Research global design trends	
CUFANM302A	Create 3D animations	
CUFANM502A	Create digital 3D environments	
LMFFDT6003A	Evaluate and participate in design industry networks	
LMFFDT6004A	Investigate legal requirements for design	
LMFID5002A	Develop a decoration proposal for a complex site	
LMFID6003A	Design for large scale commercial or institutional interiors	

Unit code	Unit title	Prerequisites
LMFID6004A	Design interiors for hospitality environments	
LMFID6005A	Design for retail interiors	
LMFID6006A	Design for conservation and restoration projects	
LMFID6007A	Select and instruct contractors and consultants	
LMFID6008A	Evaluate design project outcomes	
LMFID6009A	Produce digital presentations for commercial projects	LMFID5014A

Group B

Select a minimum of **six (6)** units from Group B.

Unit code	Unit title	Prerequisites
CPCBC4037A	Prepare drawing for heritage works	
BSBCRT501A	Originate and develop concepts	
BSBDES304A	Source and apply design industry knowledge	
BSBPMG510A	Manage projects	
CUFANM303A	Create digital 3D models	

Unit code	Unit title	Prerequisites
CUFDIG507A	Design digital simulations	
LMFFDT5002A	Apply resources sustainably	
LMFFDT5004A	Develop self as a furniture designer	
LMFID5004A	Specify structural elements, systems and services for interior spaces	LMFID5003A
LMFID5005A	Explore and apply creative design methodology to interior space	
LMFID5006A	Design interior lighting	LMFID4008A
LMFID5007A	Decorate for events	
LMFID5008A	Design for people with disabilities and the elderly	
LMFID5009A	Research and recommend colour and applied finishes	LMFID4001A
LMFID5010A	Provide interior styling service	
LMFID5011A	Specify soft furnishings for complete interior solution	
LMFID5012A	Research and recommend	

Unit code	Unit title	Prerequisites
	artwork	
LMFID5013A	Design for small to medium scale commercial or institutional interiors	
LMFID5014A	Use CAD applications to complete models and documentation for interior design projects	
LMFID5015A	Decorate interiors for restoration projects	
SIRRMER009A	Produce perspective drawings, plans and elevations	
SIRRMER020A	Create and implement exhibition space	

Group C

Select a minimum of **seven (7)** units from Group C.

Unit code	Unit title	Prerequisites
BSBCRT401A	Articulate, present and debate ideas	
BSBCRT402A	Collaborate in a creative process	
BSBDES301A	Explore the use of colour	

Unit code	Unit title	Prerequisites
BSBDES305A	Source and apply information on the history and theory of design	
BSBDES401A	Generate design solutions	
BSBDES403A	Develop and extend design skills and practice	
BSBMGT402A	Implement operational plan	
BSBSMB405A	Monitor and manage small business operations	
BSBWOR204A	Use business technology	
CUFDIG303A	Produce and prepare photo images	
CUFDIG304A	Create visual design components	
CUVCOR08B	Produce drawings to represent and communicate the concept	
CUVCRS03B	Produce computer-aided drawings	
CUVDSP11B	Research and apply techniques for illustrative work	
CUVDSP15B	Research and apply techniques for application to	

Unit code	Unit title	Prerequisites
	spatial design	
LMFFDT4012A	Produce ideation drawings	
LMFID3002A	Source and specify decoration products	
LMFID4003A	Prepare a materials board for client presentation	
LMFID4004A	Research and recommend furniture and accessories	
LMFID4005A	Research and recommend soft furnishings for interiors	
LMFID4006A	Research and recommend hard materials and finishes for interiors	
LMFID4007A	Identify materials, construction techniques and methods used in building interiors	
LMFID4008A	Assess interior light and recommend light fittings	
LMFID4009A	Research architectural styles and movements	
LMFID4010A	Research interior decoration and	

Unit code	Unit title	Prerequisites
	design influences	
MEM16006A	Organise and communicate information	
MSAENV672B	Develop workplace policy and procedures for sustainability	

Group D

Up to **seven (7)** relevant units can be chosen from other units not already selected from Groups A, B and C, or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Diploma level (maximum 2 units) or Advanced Diploma level (maximum 3 units).

Units selected from other Training Packages and accredited courses via Group D must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMF60308 Advanced Diploma of Furniture Design and Technology

Modification History

Not applicable.

Description

This qualification describes the skills and knowledge required to design furniture and translate the design into a finished furniture product for either custom or volume production.

Job roles/employment outcomes

LMF60308 Advanced Diploma of Furniture Design and Technology is streamed to reflect two primary occupational outcomes in the areas of fine furniture making - with a focus on skills required to design and produce individual fine furniture for display or custom production or furniture design - with a focus on skills required to design furniture for volume production. Work involves using a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specified functions. Accountability and responsibility for self and others in achieving outcomes is involved.

Application

This qualification is typically used to develop a breadth, depth and complexity of skills and knowledge in furniture design and technology for:

1. Fine furniture making - with a focus on skills required to design and produce individual fine furniture for display or custom production.
2. Furniture design - with a focus on skills required to design furniture for volume production

Pathways into the qualification

This qualification may be accessed by direct entry. Credit can be granted towards this qualification by those who have completed LMF50508 Diploma of Furniture Design and Technology or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification may include relevant higher education programs and management or competitive manufacturing qualifications.

Licensing considerations

There are no specific licences that relate to this qualification. However, depending on the jurisdiction, licensing or regulatory requirements may apply to the use of some units in this qualification. Local regulations should be checked for details.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • communicate effectively and efficiently with colleagues, suppliers, clients and others involved in the design project, using a variety of communication methods • interpret and negotiate design briefs • analyse technical and conceptual information • conduct research to inform project outcomes • communicate and sell design ideas and concepts using a variety of presentation methods • produce detailed technical drawings to industry standard • complete documentation relating to the project • undertake measurements and calculations and document in specification schedule • interpret client needs and documentation including client briefs, quotations, fee schedules, proposal documents, product finishes, schedules and drawings • interact with and negotiate with industry representatives
Teamwork	<ul style="list-style-type: none"> • provide leadership in developing and realizing design concepts • demonstrate and encourage others in working cooperatively with people of different ages, gender, race or religion • undertake appropriate and effective communication with others in the design process • provide others with constructive and meaningful feedback
Problem-solving	<ul style="list-style-type: none"> • interpret and resolve design briefs which meet client needs and are achieved within the parameters of the project • analyse and apply research findings into design solutions • develop and resolve ideas for a range of design challenges • recognise and address quality issues and problems relating to design and business activities • solve problems in relation to the realisation of desired design outcomes that are environmentally, economically and socially sustainable • use expertise to provide problem solving advice • identify and address unexpected problems, hazards, time delays and structural implications as they arise • evaluate design solutions for best fit • evaluate information to guide design development and processes • assess commercial viability of designs
Initiative and enterprise	<ul style="list-style-type: none"> • anticipate and address problems, hazards, time delays and structural implications

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
	<ul style="list-style-type: none"> • initiate a design direction and options for the project • provide leadership in design and manage project changes • identify and address non-conformances • identify effective ways to achieve design outcomes • rectify problems promptly and appropriately • develop original design concepts • apply continual improvement processes to design service
Planning and organising	<ul style="list-style-type: none"> • develop project schedules on time, to agreed industry standards and in coordination with other project timelines • make, confirm and alter client and supplier appointments according to workplace schedules and personnel activities • collect, analyse and organise client information to arrange projects professionally and on time • prepare project proposals with all information to enable clients to make efficient and informed choices • plan work requirements for self and others as required • monitor quality outcomes
Self-management	<ul style="list-style-type: none"> • evaluate and monitor work outcomes against work schedule and quality standards • manage own time and work load priorities effectively • monitor information in work area • keep the work area clean and tidy at all times • locate, interpret and apply relevant information • provide leadership for project work
Learning	<ul style="list-style-type: none"> • conduct ongoing professional research in design and technology knowledge • maintain professional skills and industry contacts • manage own learning and professional development activities • accept and respond to feedback, and use feedback as an opportunity to improve professional knowledge and skills • identify shortfalls in knowledge and undertake research or training to fill gaps • assess competencies in meeting job requirements • ask questions to expand own knowledge • experiment with design and technology ideas and review outcomes
Technology	<ul style="list-style-type: none"> • observe OHS principles when using technology • research technological developments relevant to design work • use computers and appropriate software to develop and realise a design solution • use technology to organise and maintain client and business

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY

	data <ul style="list-style-type: none"> work with technology safely and according to workplace standards
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Packaging Rules**Packaging Rules**

To be awarded the LMF60308 Advanced Diploma of Furniture Design and Technology, competency must be achieved in **thirty-six (36)** units of competency.

- nine (9)** core units of competency
- twenty-seven (27)** elective units of competency.

Note: Where prerequisite units apply, these have been listed, and must be considered in the total number of units.

CORE UNITS

Complete all **nine (9)** units from this list.

Unit code	Unit title	Prerequisites
BSBDES401A	Generate design solutions	
BSBDES601A	Manage design realisation	
LMFFDT4007A	Establish design brief	
LMFFDT4012A	Produce ideation drawings	
LMFFDT4014A	Research and select furniture materials and technology	
LMFFDT4015A	Research furniture styles and movements	

Unit code	Unit title	Prerequisites
LMFFDT5004A	Develop self as a furniture designer	
LMFFDT5013A	Evaluate furniture design proposals and concepts	
MSAENV272B	Participate in environmentally sustainable work practices	

ELECTIVE UNITS

Select **twenty-seven (27)** units from Groups A, B, C, D or E and F as specified below.

Group A

Select **one (1)** unit from Group A.

Unit code	Unit title	Prerequisites
LMFFDT4006A	Establish and maintain a safe furniture making work environment	
LMFFDT4008A	Determine occupational health and safety implications of designs	

Group B

Select a minimum of **six (6)** units from Group B including a minimum of **two (2)** units coded LMF*****.

Unit code	Unit title	Prerequisites
BSBADV512A	Create an advertising brief	

Unit code	Unit title	Prerequisites
BSBCRT601A	Research and apply concepts and theories of creativity	
BSBDES602A	Research global design trends	
BSBMGT605B	Provide leadership across the organisation	
BSBMGT616A	Contribute to the development and implementation of strategic plans	
BSBMGT617A	Develop and implement a business plan	
BSBMKG605B	Evaluate international marketing opportunities	
BSBMKG608A	Develop organisational marketing objectives	
BSBMKG609A	Develop a marketing plan	
BSBR501A	Manage risk	
LMFFDT6001A	Assess economic impact of a design	
LMFFDT6002A	Design for mass production	
LMFFDT6003A	Evaluate and participate in design industry networks	

Unit code	Unit title	Prerequisites
LMFFDT6004A	Investigate legal requirements for designs	
LMFFDT6005A	Work collaboratively on a design project	
LMFFDT6001B	Research and evaluate products, materials and processes	
MSACMC614A	Develop a communications strategy to support production	
MSACMS601A	Analyse and map a value chain	MSACMT631A
MSACMS602A	Manage a value chain	MSACMT601A MSACMT631A
MSACMS603A	Develop manufacturing related business plans	
MSACMT630A	Optimise cost of product	MSACMT631A
MSACMT631A	Undertake value analysis of product costs in terms of customer requirements	MSACMT230A
MSACMT650A	Determine and improve process capability	MSACMT452A
MSACMT661A	Determine and establish information collection	

Unit code	Unit title	Prerequisites
	requirements and processes	
MSACMT675A	Facilitate the development of a new product	MSACMT452A
MSAENV672B	Develop workplace policy and procedures for sustainability	
PSPPROC602A	Direct the management of contracts	

Group C

Select a minimum of **four (4)** units from Group C including a minimum of **two (2)** units coded LMF*****.

Unit code	Unit title	Prerequisites
BSBDES502A	Establish, negotiate and refine a design brief	
BSBMKG501A	Evaluate marketing opportunities	
CUFANM303A	Create digital 3D models	
LMFDN5001B	Generate and transfer complex computer-aided drawings and specifications	
LMFDN5006B	Manage furniture design	
LMFFDT5001A	Apply ergonomics, anthropometrics	

Unit code	Unit title	Prerequisites
	and proxemic considerations to a product	
LMFFDT5002A	Apply resources sustainably	
LMFFDT5003A	Assess and resolve technical integrity of a design	
LMFFDT5005A	Construct custom furniture using advanced techniques	
LMFFDT5007A	Design a batch or limited production item of furniture	
LMFFDT5008A	Design a furniture product using high volume technology services (HVTs) in production	
LMFFDT5009A	Design a one-off item of furniture	
LMFFDT5010A	Research and recommend alternative manufacturing processes	
LMFFDT5011A	Research and recommend machine technology	
LMFFT5001B	Evaluate and select production materials and equipment for furniture production	

Unit code	Unit title	Prerequisites
LMFFFT5004B	Develop and document procedures and specifications	
LMFFFT5011B	Develop, trial and evaluate prototypes	
LMFFFT5012B	Determine production feasibility of designs	
MSACMT450A	Undertake process capability improvements	MSACMT452A
MSACMT452A	Apply statistics to processes in manufacturing	
MSAENV672B	Develop workplace policy and procedures for sustainability	

Group D

Select a minimum of **nine (9)** units from Group D including a minimum of **five (5)** units coded LMF***** if *LMFFDT4006A Establish and maintain a safe furniture making work environment* is selected from Group A.

OR

Select a minimum of **nine (9)** units from Group E including a minimum of **five (5)** units coded LMF***** if *LMFFDT4008A Determine occupational health and safety implications of designs* is selected from Group A.

Unit code	Unit title	Prerequisites
Stream 1: Fine furniture making		
BSBDES301A	Explore the use of colour	

Unit code	Unit title	Prerequisites
BSBPMG510A	Manage projects	
BSBSMB403A	Market the small business	
BSBSMB404A	Undertake small business planning	
CUFDIG303A	Produce and prepare photo images	
CUVCOR09B	Select and apply drawing techniques and media to represent and communicate the concept	
CUVCRS03B	Produce computer-aided drawings	
CUVCRS04B	Produce technical drawings	
LMFFDT4001A	Apply finishing techniques to custom furniture	
LMFFDT4002A	Assemble custom furniture	
LMFFDT4005A	Construct and evaluate furniture prototypes and samples	
LMFFDT4009A	Prepare and present furniture design information	
LMFFDT4010A	Produce and evaluate developmental furniture models	

Unit code	Unit title	Prerequisites
	to scale	
LMFFDT4011A	Set up, operate and maintain basic static woodworking machines	
LMFFDT4016A	Select, use and maintain hand tools for the creation of custom furniture	
LMFFDT4017A	Set up and operate a wood turning lathe to produce off-centre work	
LMFFDT4018A	Produce templates and jigs for custom made furniture	
LMFFM4005A	Hand carve wood to custom design	
LMFFM4006A	Construct joints for custom furniture	
LMFFM4007A	Produce curved and shaped components for custom furniture	
LMFFM4008A	Produce timber veneered components for custom furniture	
LMFFT4010B	Identify and calculate production costs	
LMFFT4011B	Purchase materials and	

Unit code	Unit title	Prerequisites
	consumables for furniture production	

Group E

Unit code	Unit title	Prerequisites
Stream 2: Furniture design		
BSBCRT401A	Articulate, present and debate ideas	
BSBCRT402A	Collaborate in a creative process	
BSBCRT403A	Explore the history and social impact of creativity	
BSBCRT501A	Originate and develop concepts	
BSBDES301A	Explore the use of colour	
BSBDES303A	Explore and apply the creative design process to 3-dimensional forms	
BSBDES305A	Source and apply information on the history and theory of design	
BSBDES403A	Develop and extend design skills and practice	
BSBPMG510A	Manage projects	
BSBSMB403A	Market the small	

Unit code	Unit title	Prerequisites
	business	
BSBSMB404A	Undertake small business planning	
BSBSMB407A	Manage a small team	
CUFDIG303A	Produce and prepare photo images	
CUFDIG304A	Create visual design components	
CUVCOR09B	Select and apply drawing techniques and media to represent and communicate the concept	
CUVCRS03B	Produce computer-aided drawings	
CUVCRS04B	Produce technical drawings	
LMFFDT4003A	Assess and record the lifecycle of a product	
LMFFDT4004A	Assess environmental impact of a design	
LMFFDT4005A	Construct and evaluate furniture prototypes and samples	
LMFFDT4009A	Prepare and present furniture design information	
LMFFDT4013A	Research and	

Unit code	Unit title	Prerequisites
	select furniture finishes	
LMFFT4010B	Identify and calculate production costs	
MEM15001B	Perform basic statistical quality control	
MEM16006A	Organise and communicate information	
MEM16007A	Work with others in a manufacturing, engineering or related environment	
MEM16008A	Interact with computing technology	
MEM16013A	Operate in a self directed team	MEM16007A
MEM30001A	Use computer aided drafting systems to produce basic engineering drawings	MEM16006A MEM16008A
MEM30004A	Use CAD to create and display 3D models	MEM16008A MEM30001A
MEM30024A	Participate in quality assurance techniques	MEM15001B
MSACMT430A	Improve cost factors in work practices	
MSACMT230A	Apply cost factors	

Unit code	Unit title	Prerequisites
	to work practices	

Group F

Up to **seven (7)** relevant units can be chosen from other units not already selected from Groups A, B, C and D, or units available in this Training Package, other endorsed Training Packages and accredited courses. Those units must be aligned at Diploma level (maximum 2 units) or Advanced Diploma level (maximum 5 units).

Units selected from other Training Packages and accredited courses via Group F must be relevant to the qualification outcome and not duplicate units available within this qualification.

If Competitive Manufacturing units are chosen (identified as MSACM in the code), these should only be selected on the basis of work requirements.

LMFAH4001A Recommend security technology, hardware and services

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the application of architectural hardware product and service knowledge to provide advice to customers/clients and other sales staff with regard to design, technical features and uses of architectural hardware products, ancillary products, prices and warranties.
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Application of the Unit

Application of the unit	<p>This unit applies to architectural hardware specifiers who provide advice to clients on product selection, price, services and warranties in regards to architectural hardware. The unit applies to clients requiring architectural hardware schedules and products for construction and renovation projects.</p> <p>This unit requires the ability to source relevant information, determine client requirements and use appropriate techniques to accurately identify architectural hardware requirements to meet client needs.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Research architectural hardware product range	1.1. Job requirements are correctly identified according to relevant product information 1.2. Suitable architectural hardware products are identified by accessing relevant sources of information 1.3. Hardware components are identified to suit client specifications and applicable legislation, codes and national standards 1.4. Available product options and features are evaluated for suitability and value 1.5. Operation of architectural hardware products and equipment is safely and accurately demonstrated according to organisational requirements 1.6. Knowledge of measurement systems used in architectural hardware product range is demonstrated
2. Recommend door and window hardware products	2.1. Customer/client needs are accurately identified 2.2. Detailed manufacturer's product specifications are provided, when applicable, and explained to customer/client to assist buying decisions according to legislative requirements 2.3. Features and benefits of products are demonstrated to customer/client using appropriate interpersonal techniques
3. Identify hardware quantities	3.1. Quantities of architectural hardware products required are accurately determined from customer/client specifications 3.2. Measuring tools are accurately used to determine imperial or metric measures relevant to job requirements 3.3. Customer/client is provided with accurate quotation for quantities estimated
4. Advise on hardware product warranties	4.1. Comparisons between architectural hardware manufacturer's warranty terms are clearly explained to customer 4.2. Individual product warranty terms and conditions are confirmed from relevant sources of information and accurately conveyed to customer/client 4.3. Customer/client is provided with written information regarding individual product warranty terms and conditions, especially extended or promotional

ELEMENT	PERFORMANCE CRITERIA
	warranties, according to organisational requirements
5. Negotiate price and payment options	<p>5.1. Store recommended retail pricing for various brand options is accurately conveyed to customer/client according applicable legislation, codes and national standards</p> <p>5.2. Individual product prices are negotiated, where necessary, according to organisational requirements to achieve sales</p> <p>5.3. Store payment options are accurately conveyed to customer/client and a preferred option negotiated following organisational requirements</p>
6. Advise on and arrange product services and repairs	<p>6.1. Customer/client is questioned to determine nature of problem</p> <p>6.2. Customer/client needs are diagnosed by accessing manufacturer's information</p> <p>6.3. Solutions are offered according to nature of problem, available product information and organisational requirements</p> <p>6.4. Service/repair process is identified and accurately described to customer, as required, according to organisational requirements</p> <p>6.5. Price and timeline for basic service/repairs are identified and quoted to customer where applicable</p> <p>6.6. Customer/client details are identified and accurately transcribed to repair form, according to organisational requirements</p> <p>6.7. Item for repair is labelled and securely stored according to organisational requirements</p> <p>6.8. Customer/client is notified without undue delay on arrival/completion of service/repair</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- identifying architectural hardware needs
- identifying suitable architectural hardware brands, prices and warranty conditions
- reading and interpreting plans, designs and specifications
- applying basic numeracy techniques
- applying safe and efficient work practices
- interpersonal communication skills
- relating to people from different social and cultural backgrounds
- dealing with customer/clients that are difficult or abusive
- dealing with customer/clients that have special needs
- presenting a professional image
- preparing documentation
- entering data using basic keyboarding skills

Required knowledge

Required knowledge includes:

- organisational policies and procedures, in relation to:
 - sales/customer services
 - methods of dealing with special needs/requests of customers
 - customer complaints
 - price negotiation
- available architectural hardware/keying system options and basic requirements for installation
- types and functions of architectural hardware/keying system
- building construction methods and types
- organisational and client confidentiality requirements
- basic problem-solving strategies
- operational principles of information technology
- principles of effective communication
- documentation requirements and processes

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to research and recommend architectural hardware and/or keying requirements, identify quantities, and advise on price, warranty and service and repair options, and include this information as required in the preparation of a brief for a client.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Critical aspects of assessment and evidence include:

- ability to match architectural hardware products to a client brief or specification
- ensuring selected architectural hardware products comply with relevant legislation, codes and standards
- explaining and demonstrating architectural hardware products to clients
- undertaking imperial and metric measurements of job requirements and matching to architectural hardware measuring systems
- estimating quantities of required architectural hardware products
- supplying accurate quotes for architectural hardware products and services
- negotiating prices
- advising on warranties, service and repair options for architectural hardware products and services
- arranging service and repairs.

Context of and specific resources for assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

Assessors must be satisfied that the candidate can competently and consistently perform all elements of the

EVIDENCE GUIDE	
	unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
Method of assessment	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways, including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
Guidance information for assessment	This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with assessing technical security requirements, or other units requiring the exercise of the skills and knowledge covered by this unit.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Job requirements

Job requirements may include:

- instructions from supervisor/management
- work schedules and completion dates
- specific client requirements
- site requirements
- security clearance and access requirements
- reporting and documentation requirements
- budget allocations
- associated legislation which may include Building Code of Australia (BCA) and Australian standards, such as:
 - AS 1428 (Set)-2010 Design for access and mobility set
 - AS 1905.1-2005 Components for the protection of openings in fire-resistant walls - Fire-resistant door sets
 - AS 4145.2-2008 Locksets and hardware for doors and windows - Mechanical locksets for doors and windows in buildings
 - AS 1670.1-2004 Fire detection, warning, control and intercom systems - System design, installation and commissioning - Fire
 - AS 1530.1-1994 Methods for fire tests on building materials, components and structures - Combustibility test for materials

Information

Information may include:

- value or importance of assets
- insurance policy agreements
- special rooms or areas requiring higher level of protection
- current/proposed operating environments
- assets and systems

RANGE STATEMENT	
	<ul style="list-style-type: none"> • activities and functions • existing security systems/equipment • existing management strategies • business and operational plans • incident history
Architectural hardware	<p>Architectural hardware may include:</p> <ul style="list-style-type: none"> • hinges • pivots • door track • locks • handles • door furniture • door closers • exit devices • sequence selectors • cylinders • keying and master keying • bolts • door stops • door seals • kick plates • door protection • sundry hardware • sanitary hardware • automatic operators • access control devices
Relevant sources of information	<p>Relevant sources of information may include:</p> <ul style="list-style-type: none"> • product catalogues • reference manuals • technical specifications • product instructions • drawings and illustrations • technical sales staff
Applicable legislation, codes and national standards	<p>Applicable legislation, codes and national standards may include:</p> <ul style="list-style-type: none"> • relevant commonwealth and state/territory legislation which affect organisational operation, such as: <ul style="list-style-type: none"> • occupational health and safety (OHS) and

RANGE STATEMENT	
	<p>environmental issues</p> <ul style="list-style-type: none"> • equal employment opportunity • industrial relations • anti-discrimination and diversity • licensing arrangements • Australian standards • quality assurance and certification requirements • relevant industry codes of practice • trade practices • award and enterprise agreements • privacy related legislation
Organisational requirements	<p>Organisational requirements may include:</p> <ul style="list-style-type: none"> • legal and organisational operational policies and procedures • operations manuals • induction and training materials • insurance policy agreements • client and organisational confidentiality requirements • organisational goals/objectives/plans/systems/processes • employer and employee rights and responsibilities • own role, responsibility and delegation • quality and continuous improvement processes and standards • client service standards • defined resource parameters • OHS policies/procedures/programs • emergency and evacuation procedures • duty of care, code of conduct, code of ethics, access and equity policy, principles and practice • records and information systems and processes • communication channels • reporting procedures
Customer/client	<p>Customer/client may include:</p> <ul style="list-style-type: none"> • owner

RANGE STATEMENT	
	<ul style="list-style-type: none"> • property/other agent • tenant • building supervisor • manager • project manager • government and legal instruments/agencies
Interpersonal techniques	<p>Interpersonal techniques may include:</p> <ul style="list-style-type: none"> • verbal or non-verbal language • two-way interaction • constructive feedback • active listening • questioning to clarify and confirm understanding • interpreting non-verbal and verbal messages • observation techniques • use of positive, confident and cooperative language • control of tone of voice and body language • use of language and concepts appropriate to cultural differences • use of clear presentations of options and consequences • demonstrating flexibility and willingness to compromise
Measuring tools	<p>Measuring tools may include:</p> <ul style="list-style-type: none"> • tape measures • callipers • vernier • steel rule

Unit Sector(s)

Unit sector	
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFAH4002A Prepare architectural door hardware schedules

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers examining and assessing door hardware and keying requirements across commercial, industrial and residential applications.
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Application of the Unit

Application of the unit	<p>This unit requires the ability to source relevant information, determine client requirements and use appropriate assessment methods to ensure an accurate determination of architectural hardware equipment/system options to meet client needs. The unit also includes compiling equipment and system requirements keying into schedules for clients.</p> <p>Where estimates and quotes are required, <i>PRSTS317 Provide estimate and quote</i>, should also be selected.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Obtain brief from clients	<p>1.1. Job requirements are reviewed and clarified with appropriate persons in accordance with organisational requirements</p> <p>1.2. Discussions with customer/client are conducted to establish and clarify scope of work</p> <p>1.3. Effective interpersonal techniques are applied when interacting with clients</p> <p>1.4. Specific site requirements are identified and details are correctly documented</p> <p>1.5. Architectural hardware requirements are discussed and applicable legislation, codes and national standards are clarified and agreed upon</p> <p>1.6. Brief documents and architectural plans are arranged in accordance with organisational requirements or company policies</p>
2. Gather, interpret and review information for preparation of hardware schedules	<p>2.1. Site restrictions, regulations and requirements are identified and complied with in accordance with applicable legislation, codes and national standards, and organisational requirements</p> <p>2.2. Information is gathered from identified sources and is relevant to assignment requirements in accordance with applicable legislation, codes and national standards, client and organisational requirements</p> <p>2.3. An assessment is carried out to identify door and frame types and locations to facilitate the accurate determination of architectural hardware requirements</p> <p>2.4. Clients activities and existing architectural hardware arrangements are reviewed to ensure uniformity throughout project</p> <p>2.5. Inconsistency and environmental factors affecting the architectural hardware of the site are identified and assessed in accordance with organisational policies and procedures</p>
3. Produce architectural door hardware schedules	<p>3.1. Information is recorded and documented in accordance with computer program and/or organisational template requirements</p> <p>3.2. Architectural hardware is integrated to reflect building security and electronic requirements</p> <p>3.3. An architectural hardware schedule is prepared in accordance with industry and organisational standards of style, format and accuracy</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.4. Recommendations for architectural hardware and alternative options are made in accordance with organisational requirements</p> <p>3.5. Documentation is processed in accordance with applicable legislation, codes and national standards, assignment and organisational requirements</p> <p>3.6. A comprehensive assessment of client architectural hardware requirements is completed within designated timeframes and presented for review to appropriate person</p>
4. Prepare and review keying schedules	<p>4.1. Principles of master keying are applied in accordance with industry practice and organisational requirements</p> <p>4.2. Keying matrix is developed to client requirements, allowing for future system expansion and mechanical capabilities of system</p> <p>4.3. Client keying requirements are confirmed and clarified according to organisational procedures</p> <p>4.4. Appropriate levels of security/access are reviewed with respect to clients assets, activities and existing security arrangements</p> <p>4.5. Information is recorded and documented in accordance with computer program and/or organisational template requirements</p> <p>4.6. Clients requirements are matched to the mechanical possibilities and limitations of master key systems</p> <p>4.7. Options are identified and client is advised on options and alternatives</p> <p>4.8. Sources of assistance in assessing requirements for key systems and master key systems are identified and assistance is sought from appropriate person in accordance with organisational procedures</p>
5. Finalise documentation for submission to client	<p>5.1. Final architectural hardware and/or keying requirements are reviewed and confirmed with client in accordance with organisational requirements</p> <p>5.2. Documentation is accurately prepared and processed and stored in accordance with client, legislative and organisational requirements</p> <p>5.3. Architectural hardware and keying schedules and other documentation are prepared according to organisational procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- identifying architectural hardware needs
- observing and assessing technical hardware and keying requirements
- reading and interpreting plans, designs and specifications
- applying basic numeracy techniques
- applying safe and efficient work practices
- communicating in a clear and concise manner
- relating to people from different social and cultural backgrounds
- presenting a professional image
- preparing schedules and other required documentation
- planning and sequencing work tasks
- entering data using basic keyboarding skills

Required knowledge

Required knowledge includes:

- risk assessment methods and procedures
- available architectural hardware/keying system options and basic requirements for installation
- types and functions of architectural hardware/keying system
- building construction methods and types
- organisational and client confidentiality requirements
- basic problem-solving strategies
- operational principles of information technology
- principles of effective communication
- documentation requirements and processes

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>A person who demonstrates competency in this unit must be able to examine and assess architectural hardware and/or keying requirements as required in preparation of a brief for client.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Critical aspects of assessment and evidence include:</p> <ul style="list-style-type: none"> • identifying site requirements through inspection, discussion with clients and identification of relevant legislation, codes, and standards • accurately identifying door and frame locations, existing architectural hardware, current or future client use patterns and environmental considerations • ability to match architectural hardware products and systems to a client brief or specification and make recommendations, including alternative options • preparation of keying schedules that match to security, access, and current and future use requirements of client.
<p>Context of and specific resources for assessment</p>	<p>This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts. It should also be understood that not always will a keying brief be necessary but should form part of the assessment process.</p>
<p>Method of assessment</p>	<p>Assessors should gather a range of evidence that is valid,</p>

EVIDENCE GUIDE	
	<p>sufficient, current and authentic. Evidence can be gathered through a variety of ways, including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>
Guidance information for assessment	<p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with assessing technical security requirements, or other units requiring the exercise of the skills and knowledge covered by this unit.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Job requirements

Job requirements may include:

- instructions from supervisor/management
- work schedules and completion dates
- specific client requirements
- site requirements
- security clearance and access requirements
- reporting and documentation requirements
- budget allocations
- associated legislation which may include Building Code of Australia (BCA) and Australian standards

Appropriate person

Appropriate person may include:

- client
- site managers
- project managers
- engineers and technicians
- technical experts
- line managers/supervisors
- colleagues
- regulatory personnel
- security consultants
- locksmiths
- architects and interior designers

Organisational requirements

Organisational requirements may include:

- legal and organisational operational policies and procedures
- operations manuals
- induction and training materials
- insurance policy agreements
- client and organisational confidentiality requirements

RANGE STATEMENT	
	<ul style="list-style-type: none"> • organisational goals/objectives/plans/systems/processes • employer and employee rights and responsibilities • own role, responsibility and delegation • quality and continuous improvement processes and standards • client service standards • defined resource parameters • occupational health and safety (OHS) policies/procedures/programs • emergency and evacuation procedures • duty of care, code of conduct, code of ethics, access and equity policy, principles and practice • records and information systems and processes • communication channels • reporting procedures
Customer/client	<p>Customer/client may include:</p> <ul style="list-style-type: none"> • owner • property/other agent • tenant • building supervisor • manager • project manager • architects • interior designers • government and legal instruments/agencies
Scope of work	<p>Scope of work may include:</p> <ul style="list-style-type: none"> • personal protection • access requirements • property or assets • conformance with insurance • legislative or other requirements
Interpersonal techniques	<p>Interpersonal techniques may include:</p> <ul style="list-style-type: none"> • verbal or non-verbal language • two-way interaction • constructive feedback • active listening

RANGE STATEMENT	
	<ul style="list-style-type: none"> • questioning to clarify and confirm understanding • interpreting non-verbal and verbal messages • observation techniques • use of positive, confident and cooperative language • control of tone of voice and body language • use of language and concepts appropriate to cultural differences • use of clear presentations of options and consequences • demonstrating flexibility and willingness to compromise
Specific site requirements	<p>Specific site requirements may relate to:</p> <ul style="list-style-type: none"> • access and egress points • time of access • access codes • keys • passes • security clearances • union requirements • OHS requirements • building codes and regulations • heritage listings • noise control
Architectural hardware	<p>Architectural hardware may include:</p> <ul style="list-style-type: none"> • hinges • pivots • door track • locks • handles • door furniture • door closers • exit devices • sequence selectors • cylinders • keying and master keying • bolts • door stops • door seals

RANGE STATEMENT	
	<ul style="list-style-type: none"> • kick plates • door protection • sundry hardware • sanitary hardware • automatic operators • access control devices • disabled access hardware
Applicable legislation, codes and national standards	<p>Applicable legislation, codes and national standards may include:</p> <ul style="list-style-type: none"> • relevant commonwealth and state/territory legislation which affect organisational operation, such as: <ul style="list-style-type: none"> • OHS • environmental issues • equal employment opportunity • industrial relations • anti-discrimination and diversity • licensing arrangements • Australian standards • quality assurance and certification requirements • relevant industry codes of practice • trade practices • award and enterprise agreements • privacy related legislation
Information	<p>Information may include:</p> <ul style="list-style-type: none"> • value or importance of assets • insurance policy agreements • special rooms or areas requiring higher level of protection • current/proposed operating environments • assets and systems • activities and functions • existing security systems/equipment • existing management strategies • business and operational plans • incident history
Assessment may involve	<p>Assessment may involve:</p>

RANGE STATEMENT	
	<ul style="list-style-type: none"> • discussions with client • visual inspections • review of client floor plans and supporting documentation • questioning policy/insurance companies/other bodies
Site assessment	<p>Site assessment may include:</p> <ul style="list-style-type: none"> • type and condition of building structures • identification of risk areas/weak points • site restrictions, regulations and requirements • access and egress patterns • floor plan • existing security equipment/systems
Door types	<p>Door types may include:</p> <ul style="list-style-type: none"> • solid core doors • hollow core doors • fire rated doors • acoustic doors • glazed doors • sliding doors • folding doors • frameless doors • glass doors • automatic doors • blast doors • ballistic doors • security screens • other door types
Frame types	<p>Frame types may include:</p> <ul style="list-style-type: none"> • steel frames • aluminium frames • timber frames • frameless doors • cavity frames • sliding frames • other frames
Environmental factors	<p>Environmental factors may include:</p> <ul style="list-style-type: none"> • physical environment (e.g. climate proximity to

RANGE STATEMENT	
	salt water, pools, chemical and dusty environments)
Computer program	Computer program may include: <ul style="list-style-type: none"> • general and propriety software programs
Organisational template	Organisational template may include: <ul style="list-style-type: none"> • enterprise specific schedules • documents or proformas used to document or record schedules or information
Documentation	Documentation may include: <ul style="list-style-type: none"> • checklists • reports • floor plans • client briefs • specifications • schedules • site survey
Key systems	Key systems may include: <ul style="list-style-type: none"> • key to differ (KD) • key to alike (KA) • master keyed (MK) • grand master key (GMK) • great grand master key (GGMK)
Master key systems	Master key systems is a generic term to describe a group of cylinders operated by more than one key, including: <ul style="list-style-type: none"> • restricted, semi-restricted and non-restricted system numbers • manufacturer restricted • factory restricted • locksmith restricted/managed • association restricted

Unit Sector(s)

Unit sector	
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA1001A Construct a basic roll up blind

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to construct a basic roll up blind
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to construct a basic blind ready for installation. The unit applies in a workplace environment and may be conducted in small to large scale enterprises.</p> <p>Applications may include a variety of employment-related skills including preparatory access and participation skills, broad-based induction skills and/or specific workplace skills. They may also include participation in a team or work group.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. OHS requirements , including personal protection needs , are observed throughout the work 1.2. Work orders are checked and confirmed with appropriate personnel 1.3. Tools and equipment suitable for construction are identified and checked for safe and effective operation 1.4. Materials are selected and checked 1.5. Hardware is selected according to work instructions
2. Complete construction	2.1. Allowances are calculated and recorded 2.2. Material is laid out and marked according to work instructions 2.3. Fabric is cut according to work order 2.4. Bottom and side hems are finished 2.5. Spline is selected, cut and attached to top of blind 2.6. Roller is cut to length and attached to spline 2.7. Control mechanism and pin end are attached 2.8. Lath and pull ring are attached 2.9. Child safety mechanisms are selected and attached
3. Apply quality checks	3.1. Finished blind is checked against work order 3.2. Finished blind is tested for correct operation 3.3. Parts of the work that do not comply with work order are repaired or re-worked
4. Finalise operation and maintain equipment	4.1. Completed work is cleaned, packaged and stored 4.2. Tools and equipment are cleaned, maintained and stored 4.3. Faulty tools and equipment are reported to supervisor 4.4. Work area is cleaned and waste is disposed of according to workplace practices 4.5. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate with workplace supervisor to:
 - confirm work orders and instructions
 - report work outcomes
- work with others and in a team to construct a basic roll up blind
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- adapt to new situations
- collect and organise information
- plan tasks and identify task outcomes
- follow workplace induction principles
- adapt to new skill requirements
- use tools and equipment
- set up and start equipment

Required knowledge

- types, characteristics, uses and limitations of roll up blind materials
- identification of equipment, processes and procedures
- workflow in relation to constructing a basic roll up blind
- State/Territory OHS legislation, regulations, standards and codes of practice relevant to constructing a basic roll up blind
- reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- terms used to describe components of a roll up blind
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- mathematical techniques for estimation and measurement of materials

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete a basic roll up blind
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in constructing a basic roll up blind
- Select and set up and maintain equipment in accordance with manufacturer instructions and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Cut fabrics accurately according to work orders
- Construct at least one basic roll up blind

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills may be conducted in workplace and simulated workplace environments
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to constructing a basic roll up blind
 - workplace practices including standard operating procedures and work instructions for constructing a basic roll up blind

Method of assessment

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills

Assessment methods should be by direct observation of

EVIDENCE GUIDE	
	<p>tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Interpret work order, locate materials and use information to complete a basic roll up blind • Apply safe handling practices and safe operating procedures for equipment, products and materials to: <ul style="list-style-type: none"> • minimise the risk of injury to self or others • prevent damage to goods, equipment and products • Identify materials and equipment used in constructing a basic roll up blind • Select and set up and maintain equipment in accordance with manufacturer instructions and workplace practices • Communicate and work with others in the work area • Report process for materials faults, damaged products or equipment • Cut fabrics accurately according to work orders • Construct at least one basic roll up blind

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> include Commonwealth, State/Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Personal protection needs	<ul style="list-style-type: none"> includes safety glasses/goggles, hearing protection, safety footwear, protective clothing and head wear, respiratory protection
Work order	<ul style="list-style-type: none"> includes quotations for work, job cards, customer orders specifications including design, size, colour and quantity
Appropriate personnel	<ul style="list-style-type: none"> may include assessor, trainer, supervisor, manager or any other person responsible for your work activity
Tools and equipment	<ul style="list-style-type: none"> includes cutting bench, shears, knives, cut off saws, sewing machines, needles, staple gun, double sided tape dispenser, file, mallet and hammer
Materials	<ul style="list-style-type: none"> includes polyester blend, metalised, PVC coated fibreglass, twill weave flock coated
Hardware	<ul style="list-style-type: none"> includes roller, lath, control mechanism, pin end, pull ring, cassette head boxes, side guides, side channels, motors, chains (plastic and stainless steel)
Work instructions	<ul style="list-style-type: none"> includes instructions for constructing a basic roll up blind
Allowances	<ul style="list-style-type: none"> may be for hardware, joins, hems
Laid out	<ul style="list-style-type: none"> material should be laid out flat and square on a cutting table large enough to take full width of

RANGE STATEMENT	
	material
Marked	<ul style="list-style-type: none"> material may be marked using chalk, markers or pencil
Child safety mechanisms	<ul style="list-style-type: none"> as required by legislation or code of practice
Tested	<ul style="list-style-type: none"> within limits of normal operation
Waste	<ul style="list-style-type: none"> may include textiles, metal, timber waste removal should be in accordance with workplace practices and environmental legislation covering disposal of industrial waste
Workplace documentation	<ul style="list-style-type: none"> may include time sheets, customer care cards, work orders, reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA2001A Use blinds and awnings sector hand and power tools

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to use hand and power tools in applications relating to the blinds and awnings sector of the furnishing industry.
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Application of the Unit

Application of the unit	<p>The unit applies to skills and knowledge required to use hand and power tools to make and install blinds and awnings. The unit applies in a workplace and on site environment and may be conducted in small to large scale enterprises.</p> <p>Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others through members of groups and teams.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hand and power tools	1.1. Types of <i>hand and power tools</i> and their functions are identified 1.2. Sources of <i>power supply</i> are recognised 1.3. <i>OHS, legislative requirements</i> and <i>workplace practices</i> for using hand and power tools are recognised and adhered to
2. Select hand tools	2.1. Appropriate <i>personal protective equipment</i> is selected, correctly fitted and used 2.2. Hand tools are selected consistent with the needs of the task 2.3. Tools are checked for safe operation and any faults are corrected or tagged and reported to <i>appropriate personnel</i> 2.4. <i>Equipment</i> is selected to hold or support material for hand tool operation
3. Use hand tools	3.1. <i>Material</i> is located and held in position for hand tool operation 3.2. Hand tools are held correctly for <i>safe operation</i> 3.3. Hand tools are used according to manufacturer's instructions and safe work practices 3.4. Hand tools are safely located when not in immediate use
4. Select power tools	4.1. Power tools are selected consistent with the needs of the task 4.2. Power tools are checked for serviceability and safe operation in accordance with OHS requirements 4.3. Power tool faults are corrected or tagged and reported to appropriate personnel 4.4. Equipment is selected to hold or support materials for power tool operation
5. Use power tools	5.1. Material is held in position for power tool operation 5.2. Power tools are set up for use according to manufacturer instructions and safe working practices 5.3. Power tools are held correctly for safe and efficient use 5.4. Power tools are used according to manufacturer instructions and safe work practices 5.5. Power tools are safely located when not in immediate use

ELEMENT	PERFORMANCE CRITERIA
6. Clean up work area and tools	6.1. Hand and power tools are cleaned after use 6.2. Operator maintenance is carried out following completion of task. 6.3. Hand and power tools are stored following completion of task 6.4. Equipment is cleaned, maintained and stored 6.5. Work area is cleared and <i>waste removed</i> 6.6. <i>Workplace documentation</i> is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate with workplace/worksite supervisor to:
 - confirm work orders and instructions
 - identify problems
 - report outcomes of hand and power tool use and maintenance problems
- work with others and in a team to safely use hand and power tools
- use pre-checking and inspection techniques to anticipate problems, avoid re-working and wastage
- participate in establishing new ideas and work specifications for selecting and using hand and power tools
- plan and organise own work, including the preparation and layout of the work area and obtaining equipment and materials to avoid back tracking
- follow workplace induction principles
- adapt to new skill requirements
- use workplace technology related to selecting and using blinds and awnings sector hand and power tools

Required knowledge

- State/Territory OHS legislation, regulations, standards and codes of practice relevant to hand and power tool use
- workplace and worksite, requirements, policies and procedures for hand and power tool use
- reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and workplace/worksite protocols
- types of tools and equipment and procedures for their safe use, operation and maintenance
- procedures for the reporting, recording and maintenance of workplace records and information
- procedures for reporting and recording faulty hand and power tools

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Communicate and work with others in the work area
- Apply safe handling practices for equipment, products and materials
 - prevent damage to goods, tools, equipment or products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Indicate compliance with organisational policies and procedures, including quality assurance requirements
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for use of hand and power tools
- Identify, select and safely use hand tools in the workplace/worksite
- Identify, select and safely use power tools in the workplace/worksite

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential required knowledge and skills, may be conducted in a workplace or simulated workplace environment
- The following resources should be made available:
 - workplace location or simulated workplace
 - hand tools as specified in the range statement
 - power tools as specified in the range statement
 - workplace practices including standard operating procedures and work instructions for using blinds and awnings sector hand and power tools

Method of assessment

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills

EVIDENCE GUIDE

Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Hand tools	<ul style="list-style-type: none"> includes calculators, pop rivet gun, screwdrivers, panel saws, hack saws, socket set, hand grinder, hammers, files, tin snips, spanners, level, square, measuring tape, hex keys, caulking gun, markers, tensioning devices, G clamps, tap and die sets, straight edges, string lines, scissors, eyelet punches, laser level, stud finder, pipe bender
Power tools	<ul style="list-style-type: none"> include bench grinders, hammer drills, cordless screwdriver/drill, air drills, jig saws, docking saws, circular saws, press-stud machine, hot knives, staple gun, hollow wall anchor gun, planer, mobile phone, torch, battery chargers
Power supply	<ul style="list-style-type: none"> include battery, mains electricity, pneumatic.
OHS requirements	<ul style="list-style-type: none"> includes Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> includes applicable legislation from all levels of government that affect organisational operation. Requirements may include award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Workplace practices	<ul style="list-style-type: none"> include legal, organisational and site guidelines, policies and procedures relating to

RANGE STATEMENT	
	own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines), tolerances, following manufacturer instructions and specifications
Personal protective equipment	<ul style="list-style-type: none"> includes safety glasses/goggles, hearing protection, safety footwear, protective clothing and head wear, respiratory protection
Appropriate personnel	<ul style="list-style-type: none"> includes trainer, assessor, supervisor, team leader, maintenance officer or manager or any person responsible for your activities in the workplace/worksite
Equipment	<ul style="list-style-type: none"> includes clamps, jigs, braces, ladders
Material	<ul style="list-style-type: none"> includes textiles (canvas, acrylic, PVC, clear PVC, mesh, binding), metals (aluminium, steel), timber
Safe operation	<ul style="list-style-type: none"> safe work practices should be followed in accordance with industry and enterprise specific policies and procedures
Waste	<ul style="list-style-type: none"> includes textiles, metals, timber waste removal should be in accordance with enterprise policies and environmental legislation covering disposal of industrial waste.
Workplace documentation	<ul style="list-style-type: none"> includes time sheets, customer care cards, work orders, reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA2002A Set up, operate and maintain blinds and awnings sector static machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to set up, operate and maintain static machines used for the production of blinds and awnings.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to use blind and awnings sector static machines. The unit applies in a workplace environment and may be conducted in small to large scale enterprises.</p> <p>Applications may include some complex or non routine activities involving individual responsibility or autonomy and/or collaboration with others through members of groups or teams</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. OHS requirements, legislative requirements, workplace practices and personal protection needs are observed throughout the work 1.2. Work orders are checked and confirmed 1.3. Machines, cutting tools and templates are identified, selected and checked for safe operation 1.4. Material for machining is selected and inspected for quality 1.5. Procedures are determined for minimising waste 1.6. Procedures are identified for maximising energy efficiency while completing the job
2. Set up machines	2.1. Safety equipment, including emergency stops, gauges, guards and controls are checked 2.2. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions 2.3. Trial runs are conducted to check machine operation, accuracy and quality of finished work 2.4. Necessary adjustments are made to machine settings
3. Operate a machine	3.1. Pre start-up checks are carried out on equipment following workplace practices 3.2. Material is fed into machine in accordance with manufacturer instructions, safe handling procedures and workplace practices 3.3. Machine is operated in accordance with its designed capacity and purpose, tooling requirements and to manufacturers specifications 3.4. Machine operation is monitored to ensure product quality and output 3.5. Waste quantities are checked and minimised 3.6. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace practices 3.7. Machining process and equipment faults are recorded and reported to the appropriate personnel
4. Conduct operator maintenance	4.1. Equipment lock out procedures are followed in accordance with OHS legislation and workplace practices 4.2. Cutting tools are checked for blunt or damaged

ELEMENT	PERFORMANCE CRITERIA
	<p>condition following workplace practices</p> <p>4.3. Cutting tools are removed and replaced in accordance with manufacturer specifications</p> <p>4.4. Machining area is kept clear of dust, off-cuts and debris in accordance with OHS requirements</p>
<p>5. Clean up work area and maintain equipment</p>	<p>5.1. Material that can be re-used is collected and stored</p> <p>5.2. Waste and scrap are removed following workplace practices</p> <p>5.3. Equipment and work area are cleaned, maintained and stored following workplace practices</p> <p>5.4. Operator maintenance is completed in accordance with manufacturer specifications and workplace practices</p> <p>5.5. Unserviceable equipment is tagged and reported to appropriate personnel</p> <p>5.6. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate with site supervisor to:
 - confirm work orders and instructions
 - identify problems
 - report outcomes of setting up, operating and maintaining static machines
- work with others and in a team to set up, operate and maintain static machines
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- identifying problems and equipment faults and demonstrate appropriate response procedures
- participate in establishing new ideas and work specifications for setting up, operating and maintaining static machines
- plan and organise own work, including the preparation and layout of the work area and obtaining equipment and materials to avoid backtracking
- accurately plan and organise work activities
- efficiently manage own responsibilities and timelines for completion of work
- follow workplace induction principles
- adapt to new skill requirements
- use workplace technology related to the production task, including specified tools, equipment, calculators and measuring devices
- use and maintain relevant tools, machinery and equipment
- efficiently and safely set up, operate and maintain static machines.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for using static machines
- organisational and workplace requirements, policies and procedures for using static machines
- reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types of machines and equipment and procedures for their safe use, operation and maintenance
- set up and operation of static machines
- characteristics of materials processed using static machines
- cutting patterns and sequences

REQUIRED SKILLS AND KNOWLEDGE

- identification of cutting tool condition and fault reporting
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- procedures for reporting machinery faults and material defects
- mathematical procedures for estimation and measurement
- the range, characteristics, uses and limitations of blinds and awnings sector static machines
- general workplace quality standards and procedures
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Read and interpret work orders and job specifications to prepare for setting up and operating static machines • Apply safe handling requirements for equipment, machines, products and materials to: <ul style="list-style-type: none"> • minimise the risk of injury to self or others • prevent damage to goods, equipment and products • Communicate and work with others in the work area • Identify materials used in static machines • Select and set up static machines following manufacturer's instructions and workplace practices • Operate static machines following manufacturer's specifications and safe work practices including the use of safety equipment and personal protective equipment • Maintain static machines following manufacturer's specifications and workplace practices
<p>Context of, and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge and skills, may be conducted in work place or simulated workplace environments • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to setting up, operating and maintaining static machines • specifications and work instructions • workplace practices including standard operating procedures and work instructions for setting up, operating and maintaining static machines.
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of</p>

EVIDENCE GUIDE	
	<p>required knowledge and skills</p> <p>Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> include Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> include applicable legislation from all levels of government that affect organisational operation. Requirements may include award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Workplace practices	<ul style="list-style-type: none"> include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Personal protection needs	<ul style="list-style-type: none"> includes safety glasses/goggles, hearing protection, safety footwear, protective clothing, respiratory protection
Work orders	<ul style="list-style-type: none"> includes quotations for work, job cards, customer care cards, worksheets
Material	<ul style="list-style-type: none"> includes textiles, metal, timber

RANGE STATEMENT	
Machines	<ul style="list-style-type: none"> includes roller guillotines, lath cutter, Venetian punches, special crimping pliers, drill press, docking saw, sewing machines (plain foot zig zag machine, walker foot zig zag machine, chain stitch machine, tape binding machines, overlocker), computerised fabric cutters (aeronaught /pizza wheel, laser cutters, ultra sonic cutter), RF welder, pelmet blender, press stud machine, fabric slitters, computerised venetian machines (multi-stage punching, single-stage punching), fabric carousel, vertical blind cutters (manual, hydraulic, air, computerised), eyelet machine, tube bender
Templates	<ul style="list-style-type: none"> include folding creases, scallops, trims
Waste	<ul style="list-style-type: none"> includes textiles, metals, timber
Energy efficiency	<ul style="list-style-type: none"> includes using on/off/standby as required, ensuring machine is turned off at completion of work or shift
Safety equipment	<ul style="list-style-type: none"> include emergency stops, cut out switches and machine guards
Manufacturer's instructions	<ul style="list-style-type: none"> includes written instruction booklets, instructions on the equipment or instructions for correct use.
Trial run	<ul style="list-style-type: none"> includes dry runs of machine, test runs on materials to check settings
Machine operation	<ul style="list-style-type: none"> include settings, programming, manufacturer specifications for safe operation
Pre-start up checks	<ul style="list-style-type: none"> are conducted to ensure the equipment has been set-up correctly, cutting tools are installed accurately and machinery operating to optimum performance
Output	<ul style="list-style-type: none"> includes the speed or rate at which material is machined
Recorded and reported	<ul style="list-style-type: none"> includes the machining method, product type, size, inspection, grading and labelling outcomes, storage locations, quality outcomes, hazards, incidents or equipment malfunctions
Appropriate personnel	<ul style="list-style-type: none"> includes assessors, trainers, supervisors, suppliers, clients, colleagues and managers and any other person responsible for your

RANGE STATEMENT	
	work activities
Operator maintenance	<ul style="list-style-type: none"> is conducted to ensure machinery is in safe working order and to prevent unscheduled machinery downtime
Workplace documentation	<ul style="list-style-type: none"> includes time sheets, customer care cards, work orders, reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA2004A Select and apply blinds and awnings hardware and fixings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to select hardware and other fixings in the manufacturing and installation of blinds and awnings.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to select and apply hardware and fixings for blinds and awnings construction and installation. The unit applies in a workplace and on-site environment and may be conducted in a small to large scale enterprises.</p> <p>Applications may include some complex or non routine activities involving individual responsibility or autonomy and/or collaboration with others through members of groups or teams</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare work	1.1. OHS requirements, legislative requirements and workplace practices 1.2. Personal protective equipment are observed throughout the work 1.3. Types of hardware and fixings are identified and selected for the work 1.4. Tools and equipment for application are identified and checked for safe operation
2. Apply and/or fit and finish	2.1. Hardware items are laid out ready for application 2.2. Hardware and fixings are applied as required according to work instructions and workplace practices 2.3. Work is checked against required quality standards
3. Finalise operation and maintain equipment	3.1. Work area is cleaned and waste removed 3.2. Waste and scrap materials are dealt with following workplace practices 3.3. Hand and power tools and equipment are cleaned, maintained and stored in accordance with workplace practices 3.4. Machinery is cleaned and left in safe mode 3.5. Faulty and/or defective equipment is tagged and reported to appropriate personnel 3.6. Unused hardware is collected and stored for reuse or disposal following workplace practices 3.7. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate with site supervisor to:
 - confirm work orders and instructions
 - identify problems
 - report outcomes of selecting and applying hardware and fixings
- work with others and in a team to select and apply hardware and fixings
- use pre-checking and inspection techniques to anticipate production problems, avoid reworking and wastage
- participate in establishing new ideas and work specifications for selecting and applying hardware and fixings
- plan and organise activities, including the preparations and layout of the worksite and the obtaining of equipment and materials to avoid backtracking
- follow workplace induction principles
- accurately plan and organise own work activities
- adapt to new skill requirements
- use workplace technology related to selecting and applying hardware and fixings including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for selecting and applying hardware and fixings
- organisational and site standards, requirements, policies and procedures for applying hardware and fixings
- reading and interpreting workplace documents including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types of tools and equipment used to apply hardware and fixings and procedures for their safe use, operation and maintenance
- characteristics of hardware and fixings and their use
- set up and operation of tools and equipment used for applying hardware and fixings
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Interpret work order, locate materials and use information to complete selecting and applying hardware and fixings • Apply safe handling practices and safe operating procedures for equipment, products and materials to: <ul style="list-style-type: none"> • minimise the risk of injury to self or others • prevent damage to goods, equipment and products • Identify materials and equipment used in applying hardware and fixings • Select, set up and maintain tools and equipment in accordance with manufacturer instructions and workplace practices • Communicate and work with others in the work area • Report process for materials faults, damaged products or equipment • Identify, select and apply hardware and fixings to at least 4 different styles of blinds and awnings
<p>Context of, and specific resources for assessment</p>	<p>The application of competency is to be assessed in the workplace or simulated workplace</p> <p>Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints</p> <p>Assessment of required knowledge and skills, may be conducted in a workplace or simulated workplace environment</p> <p>The following resources should be made available:</p> <p>workplace location or simulated workplace</p> <p>hardware, fixings and tools and equipment for the application of hardware and fixings for blinds and awnings construction and installation</p> <p>workplace practices including standard operating procedures and work instructions for selecting and applying hardware and fixings</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of</p>

EVIDENCE GUIDE

	<p>workplace relevant contexts) together with application of required knowledge and skills</p> <p>Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements	<ul style="list-style-type: none"> include Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> include applicable legislation from all levels of government that affect organisational operation. Requirements may include award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Workplace practices	<ul style="list-style-type: none"> include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Personal protective equipment	<ul style="list-style-type: none"> may include safety glasses/goggles, hearing protection, safety footwear, protective clothing, respiratory protection
Hardware	<ul style="list-style-type: none"> includes screws, nails, pop rivets, plugs, tek screws, loxons, Dynabolts, split pins, nuts and bolts, cord locks, wands, head rails, head boxes,

RANGE STATEMENT	
Fixings	<ul style="list-style-type: none"> include chemical anchors, hollow wall anchors, spring brackets, mongo plugs, masking tape, silicone spray, CRC, silastic
Tools and equipment	<ul style="list-style-type: none"> include pop rivet guns, screwdriver (hand, power and cordless), hammer, drills (hand, powered and cordless), hollow wall anchor gun, caulking gun
Work instructions	<ul style="list-style-type: none"> includes instructions for the application of hardware components
Quality standards	<ul style="list-style-type: none"> are those standards set at workplace level
Waste	<ul style="list-style-type: none"> may include textiles, metals, timber, masonry, plaster, plastic and paper packaging, broken hardware and fixings, tape rolls, spray cans
Workplace documentation	<ul style="list-style-type: none"> may include time sheets, customer care cards, work orders

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFBA2005A Construct roll up and pull down style blinds and awnings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to construct roll up and pull down style blinds and awnings for interior and exterior applications.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to construct roll up and pull down style blinds and awnings. The unit applies in a workplace environment and may be conducted in a small to large scale enterprises.</p> <p>Applications may include some complex or non routine activities involving individual responsibility or autonomy and collaboration with others through members of groups and teams</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish work requirements and prepare for work	1.1. OHS requirements, legislative requirements , and workplace practices are observed throughout the work 1.2. Personal protective equipment is selected and used 1.3. Work orders are checked and confirmed 1.4. Material and hardware is selected and checked against work orders 1.5. Material is checked for flaws
2. Join, lay out, mark and cut fabrics	2.1. Tools and equipment are selected and used according to manufacturer's instructions and workplace procedures 2.2. Allowances are calculated and recorded 2.3. Materials are joined to make required width 2.4. Cutting equipment is checked for safe operation 2.5. Materials are cut making allowances for hardware 2.6. Material is laid out flat and square and marked according to workplace practices 2.7. Decorative edges, gimps and fringes are selected, measured and cut according to work order 2.8. Measurements are checked against work order
3. Construct product	3.1. Material edges are is hemmed making allowances for hardware 3.2. Decorative edging, gimps and fringes are attached to bottom edge 3.3. Hardware is prepared according to work order 3.4. Hardware is fitted to skin 3.5. Product is constructed according to work instructions 3.6. Child safety mechanisms are selected and attached
4. Apply quality checks	4.1. Completed product is checked ensuring finished product matches work order 4.2. Finished product is tested for correct operation 4.3. Parts of the work that do not comply with work order are repaired or reworked
5. Complete work	5.1. Finished work is cleaned, protected and stored following workplace practices 5.2. Tools and equipment are cleaned, maintained and stored

ELEMENT	PERFORMANCE CRITERIA
	<p>5.3. Faulty tools and equipment are reported to <i>appropriate personnel</i></p> <p>5.4. Work area is cleaned and <i>waste</i> is disposed of according to workplace practices</p> <p>5.5. <i>Workplace documentation</i> or reporting is completed</p>

Required Skills and Knowledge

Required skills

- communicate with site supervisor to:
 - confirm work orders and instructions
 - identify problems
- report outcomes of constructing textile roll up and pull down style awnings
- work with others and in a team to construct roll up and pull down style blinds and awnings
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- participate in establishing new ideas and work specifications for constructing roll up and pull down style blinds and awnings
- plan and organise own work, including preparation and layout of work area and obtaining equipment and materials to avoid backtracking
- follow workplace induction principles
- accurately plan and organise own work activities
- adapt to new skill requirements
- use workplace technology related to constructing roll up and pull down style blinds and awnings including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for constructing roll up and pull down style blinds and awnings
- organisational and workplace standards, requirements, policies and procedures for constructing roll up and pull down style blinds and awnings
- reading and interpreting workplace documents including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established line of communication and protocols
- types of tools and equipment used to construct roll up or pull down style blinds and awnings and procedures for their safe use, operation and maintenance
- characteristics of textiles and hardware used in the construction of roll up and pull down style blinds and awnings
- set up and operation of sewing and welding equipment
- computer programs
- cutting patterns and sequences
- cutting tool condition including sharpness, straightness and suitability for task
- industry standard textile roll widths
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and

Required skills
information
<ul style="list-style-type: none">• mathematical procedures for estimation and measurement of materials and hardware

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks in constructing roll up and pull down style blinds and awnings
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in constructing roll up and pull down style blinds and awnings
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Cut textiles accurately according to work orders
- Construct a minimum of two roll up and two pull down style blinds or awnings. Task is to include identifying and selecting hardware, measuring and joining materials, fitting hardware, cleaning, packaging and storing completed products

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills may be conducted in a workplace and simulated workplace environment
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to construction of roll up and pull down blinds and awnings
 - workplace practices including standard operating procedures and work instructions for constructing roll up and pull down style blinds and awnings

EVIDENCE GUIDE

Method of assessment

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills

Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> include Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> include applicable legislation from all levels of government that affect organisational operation. Requirements may include award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Workplace practices	<ul style="list-style-type: none"> include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines), tolerances, following manufacturer instructions and specifications
Personal protective equipment	<ul style="list-style-type: none"> includes safety glasses/goggles, hearing protection, safety footwear, protective clothing, respiratory protection
Work order	<ul style="list-style-type: none"> includes quotations for work, job cards, customer orders, worksheets
Material	<ul style="list-style-type: none"> includes canvas, acrylic, PVC, clear PVC, mesh, binding, woven fibreglass PVC

RANGE STATEMENT	
Hardware	<ul style="list-style-type: none"> includes rollers, battens, running assemblies, spring, rope edge, rivets, tek screws, screws, guide rails, head boxes
Tools and equipment	<ul style="list-style-type: none"> includes drill and bits, hack saw, aluminium bench saw, tape measure, pop rivet gun, tek gun, screwdriver (power, cordless and hand) cutting bench, shears, knives, cut off saws, sewing machines, needles, staple gun, double sided tape dispenser, file, mallet and hammer
Manufacturer instructions	<ul style="list-style-type: none"> may be written instruction booklets, instructions on the tools and equipment or instructions for correct use
Joined	<ul style="list-style-type: none"> may include sewing or welding processes
Allowances	<ul style="list-style-type: none"> measurements of textiles to be adjusted to allow for selected hardware, joins and hems
Marked	<ul style="list-style-type: none"> using suitable medium such as chalk, pen, pencil
Hemmed	<ul style="list-style-type: none"> using sewing or welding processes and making allowances for hardware
Work instructions	<ul style="list-style-type: none"> includes instructions for the construction of roll up and pull down style blinds and awnings
Child safety mechanisms	<ul style="list-style-type: none"> as required by legislation or code of practice
Tested	<ul style="list-style-type: none"> within limits of normal operation
Appropriate personnel	<ul style="list-style-type: none"> include assessor, trainer, supervisor, team leader, maintenance officer or manager, or any other person responsible for your work activity
Waste	<ul style="list-style-type: none"> may include textiles, metal, timber waste removal should be in accordance with enterprise policies and environmental legislation covering disposal of industrial waste
Workplace documentation	<ul style="list-style-type: none"> may include time sheets, customer care cards, work orders and reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA2006A Construct vertical style blinds

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to construct vertical style blinds
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to construct vertical style blinds. The unit applies in a workplace environment and may be conducted in small to large scale enterprises.</p> <p>Applications may include some complex or non routine activities involving individual responsibility or autonomy and collaboration with others through members of groups and teams</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish work requirements and prepare for work	1.1. OHS requirements, legislative requirements and workplace practices are observed throughout the work 1.2. Personal protective equipment is selected and used 1.3. Work orders are checked and confirmed 1.4. Material is selected from stock and checked against work order 1.5. Tools and equipment are selected and checked for safe operation 1.6. Hardware is selected and checked against work order
2. Lay out, mark and cut materials	2.1. Correct side of materials and pattern direction are identified 2.2. Allowances are calculated and recorded 2.3. Material is laid out and marked 2.4. Cutting equipment is checked for safe operation 2.5. Material is cut following workplace practices
3. Construct blind	3.1. Headline and spline shaft is identified, selected and cut to manufacturer specifications 3.2. Hardware is selected for headrail and assembled to manufacturer specifications 3.3. Slats are finished according to workplace practices 3.4. Finishing hardware is attached according to work instructions 3.5. Child safety mechanisms are selected and attached
4. Apply quality checks	4.1. Finished blinds are checked ensuring finish and final length of blinds match work order 4.2. Finished blind is tested for correct operation 4.3. Parts of the work that do not comply with work order are repaired or re-worked
5. Complete work	5.1. Completed work is cleaned, protected and stored 5.2. Tools and equipment are cleaned, maintained and stored 5.3. Faulty tools and equipment are reported to appropriate personnel 5.4. Work area is cleaned and waste is disposed of according to workplace practices 5.5. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate with site supervisor to:
 - confirm work orders and instructions
 - identify problems
- report outcomes of cutting fabric and constructing and finishing vertical style blinds
- work with others and in a team to construct vertical style blinds
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- participate in establishing new ideas and work specifications for constructing vertical style blinds
- plan and organise activities, including the preparations and layout of the worksite and the obtaining of equipment and materials to avoid backtracking
- follow workplace induction principles
- accurately plan and organise own work activities
- adapt to new skill requirements
- use workplace technology related to constructing vertical style blinds including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for constructing vertical style blinds
- organisational and workplace standards, requirements, policies and procedures for constructing vertical style blinds
- reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types of tools and equipment used to construct vertical style blinds and procedures for their safe use, operation and maintenance
- terms used to describe components of a vertical style blind
- characteristics of materials used in the construction of vertical blinds
- set up and operation of basic static machines
- computer programs
- cutting patterns and sequences
- cutting tool condition including sharpness, straightness and suitability for task
- industry standard fabric widths
- storage systems and labelling

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• procedures for the recording, reporting and maintenance of workplace records and information• mathematical techniques for estimation and measurement of materials |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks in constructing vertical style blinds
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in constructing vertical style blinds
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Follow operating procedures to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Maintain equipment to ensure production output and product quality
- Communicate effectively and work safely with others in the work area
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment
- Cut fabrics accurately according to work orders
- Construct a minimum of two vertical style blinds using two different tracking systems. Task is to include selecting components, making headbox, cutting and sewing/welding/gluing fabric and assembly

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace environment
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • Assessment of required knowledge and skills, may be conducted in a work based or off-site context • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to constructing holland style blinds • standard operating procedures of the workplace • work practices including standard operating procedures and work instructions for constructing vertical style blinds
Method of assessment	<p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills</p> <p>Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> includes Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> includes applicable legislation from all levels of government that affect organisational operation. Requirements may include award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Workplace practices	<ul style="list-style-type: none"> includes legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines), tolerances and following manufacturer instructions
Personal protective equipment	<ul style="list-style-type: none"> includes safety glasses/goggles, hearing protection, safety footwear, protective clothing, respiratory protection
Work orders	<ul style="list-style-type: none"> may include customer order forms, job cards, quotations for work, worksheets
Material	<ul style="list-style-type: none"> may include polyester blend fabrics, timber, cord

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> includes spacing machine, cut off saw, link spacing tool, pliers, scissors, vane cutter
Hardware	<ul style="list-style-type: none"> includes chain, spline shaft, motor, head rail
Allowances	<ul style="list-style-type: none"> may be for hardware, joins, hems
Laid out	<ul style="list-style-type: none"> material should be laid out flat and square on a cutting table large enough to take full width of material
Marked	<ul style="list-style-type: none"> material may be marked using chalk, markers or pencil
Manufacturer specifications	<ul style="list-style-type: none"> may include written or verbal specifications
Finished	<ul style="list-style-type: none"> may include sewing, welding or gluing
Work instructions	<ul style="list-style-type: none"> includes instructions for the variations in construction of vertical style blinds
Finishing hardware	<ul style="list-style-type: none"> includes hangers, weights, chains
Child safety mechanisms	<ul style="list-style-type: none"> as required by legislation or code of practice
Tested	<ul style="list-style-type: none"> within limits of normal operation
Appropriate personnel	<ul style="list-style-type: none"> includes assessors, trainers, supervisor, team leader, maintenance officer or manager or any other person responsible for your work activity
Waste	<ul style="list-style-type: none"> include textiles, metal, timber, hardware waste removal should be in accordance with workplace practices and environmental legislation covering disposal of industrial waste
Workplace documentation	<ul style="list-style-type: none"> may include time sheets, customer care cards, work orders, reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA2007A Construct textiles for canopy style awnings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to construct the textile components of canopy style awnings
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to construct textiles for canopy style awnings. The unit applies in a workplace environment and may be conducted in small to large scale enterprises.</p> <p>Applications may include some complex or non routine activities involving individual responsibility or autonomy and collaboration with others through members of groups and teams</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for work	1.1. OHS requirements, legislative requirements and workplace practices are observed throughout the work 1.2. Personal protective equipment is selected and used 1.3. Work order is reviewed, confirmed and clarified with appropriate personnel 1.4. Frame is measured and quantities of materials calculated 1.5. Textiles are selected and checked for flaws according to workplace practices 1.6. Tools and equipment are selected and used according to workplace practices and manufacturer's instructions
2. Lay out, mark and cut textiles	2.1. Correct side of textile, naps, direction of patterns and pattern matches are identified 2.2. Textiles are laid over frame 2.3. Textiles are measured and marked to fit frame leaving joining allowances 2.4. Panels are marked and cut 2.5. Scallops are marked and cut 2.6. Textiles are cut 2.7. Measurements are checked against work order
3. Join textiles	3.1. Textiles are joined according to workplace practices 3.2. Textiles are laid over frame and perimeter pockets marked 3.3. Pockets are sewn 3.4. Scallop edging is attached
4. Construct awning	4.1. Method of fixing skin to frame is determined 4.2. Textile skin is constructed according to work instructions 4.3. Skin is attached to frame according to work instructions 4.4. Frame is braced
5. Apply quality checks	5.1. Completed awnings are checked ensuring finish and final size match work requirements 5.2. Parts of the work that do not comply with work order are repaired or reworked 5.3. Frame is checked for damage and repairs made if

ELEMENT	PERFORMANCE CRITERIA
	necessary according to workplace practices
6. Complete work	6.1. Finished work is cleaned, protected and stored following workplace practices 6.2. Tools and equipment are cleaned, maintained and stored 6.3. Faulty tools and equipment are reported to appropriate personnel 6.4. Work area is cleaned and <i>waste</i> is disposed of according to workplace practices 6.5. <i>Workplace documentation</i> is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate with site supervisor to:
 - confirm work orders and instructions
 - identify problems
 - report outcomes of constructing textiles for canopy style awnings
- work with others and in a team to construct textiles for canopy style awnings
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- participate in establishing new ideas and work specifications for constructing textiles for canopy style awnings
- plan and organise own work including preparation and layout of work area and obtaining equipment and materials to avoid backtracking
- follow workplace induction principles
- accurately plan and organise own work activities
- adapt to new skill requirements
- use workplace technology related to construct textiles for canopy style awnings, including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for constructing textiles for canopy style awnings
- organisational and workplace standards, requirements, policies and procedures for constructing canopy style awnings
- reading and interpreting workplace documents including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types of tools and equipment used to construct textiles for canopy awnings and procedures for their safe use, operation and maintenance
- terms used to describe components of canopy style awnings
- characteristics of textiles used for canopy style awnings
- set up and operation of static machines
- cutting patterns and sequences
- cutting tool condition including sharpness, straightness and suitability for task
- industry standard cross sections and lengths for framing materials
- industry standard textile widths

REQUIRED SKILLS AND KNOWLEDGE

- | |
|--|
| <ul style="list-style-type: none">• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• mathematical techniques for estimation and measurement of materials |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete construct textiles for canopy style awnings
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in constructing canopy style awnings
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Construct a minimum of three different textile canopy style awnings. Task is to include measuring, cutting, joining and fixing the skin to the frame with a tight drum-like finish.

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace environment
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills, may be conducted in work based and off site contexts
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to constructing textiles for canopy style awnings
 - workplace practices including standard operating procedures and work instructions for constructing textiles for canopy style awnings

Method of assessment

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills

EVIDENCE GUIDE

Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements	<ul style="list-style-type: none"> includes Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> includes applicable legislation from all levels of government that affect organisational operation. Requirements may include award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Workplace practices	<ul style="list-style-type: none"> include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines), tolerances, following manufacturer instructions and specifications
Personal protective equipment	<ul style="list-style-type: none"> includes safety glasses/goggles, hearing protection, safety footwear, protective clothing, respiratory protection
Work order	<ul style="list-style-type: none"> may include quotations for work, job cards, customer orders, worksheets specifications including design, size and colour

RANGE STATEMENT	
Appropriate personnel	<ul style="list-style-type: none"> may include supervisors, suppliers, clients, colleagues and managers or any person responsible for your work activity
Frame	<ul style="list-style-type: none"> shape will vary according to customer requirements, and may include dutch hoods (with end style variations), florentines and cupola
Materials	<ul style="list-style-type: none"> may include canvas, acrylic, PVC, clear mesh, hoop iron, pop rivets, rope edge, cara groove track
Tools and equipment	<ul style="list-style-type: none"> includes tape measure, scissors, sewing machine, welding equipment, marking pens, pop rivet guns
Manufacturer instructions	<ul style="list-style-type: none"> may be written instruction booklets, instructions on the tools and equipment or instructions for correct usage
Laid over	<ul style="list-style-type: none"> ensuring fabric is square and pulled tight over frame
Joining allowances	<ul style="list-style-type: none"> 12 mm or as specified by the textile manufacturer
Panels	<ul style="list-style-type: none"> number and shape will vary according to size and shape of canopy frame
Joined	<ul style="list-style-type: none"> may include sewing or welding
Method	<ul style="list-style-type: none"> may include screws, hoop iron and pop rivets, rope edge or cava groove track,
Work instructions	<ul style="list-style-type: none"> is to include instructions for the construction of textiles for canopy style awnings
Braced	<ul style="list-style-type: none"> for aluminium framed canopy style awnings
Waste	<ul style="list-style-type: none"> may include textiles, metal, timber waste removal should be in accordance with workplace practices and environmental legislation covering disposal of industrial waste
Workplace documentation	<ul style="list-style-type: none"> may include time sheets, customer care cards, work orders, reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA2008A Construct plastic and timber Venetian-style blinds

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to construct plastic and timber Venetian-style blinds
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to construct plastic and timber Venetian-style blinds. The unit applies in a workplace environment and may be conducted in a small to large scale enterprises.</p> <p>Applications may include some complex or non routine activities involving individual responsibility or autonomy and/or collaboration with others through members of groups and teams</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish work requirements and prepare for work	1.1. OHS requirements, legislative requirements and workplace practices are observed throughout the work 1.2. Personal protective equipment is selected and used 1.3. Work order is reviewed, confirmed and clarified with appropriate personnel 1.4. Materials, hardware and fixings are selected and checked against work orders
2. Measure, mark and cut slats	2.1. Slats are measured to length and marked 2.2. Slats are cut 2.3. Cord holes are punched in slats 2.4. Slats are finished as required according to work order
3. Assemble blind	3.1. Head rail components , bottom rails and tilt rod are selected and cut 3.2. Head rails are assembled according to manufacturer instructions or workplace practices 3.3. Correct spacing for slats is determined 3.4. Cords and ladder braids are selected and attached to head rail components 3.5. Hardware is attached according to work instructions 3.6. Slats are threaded through ladder tapes 3.7. Measuring tape is used to confirm final size and blind adjusted 3.8. Bottom rail is attached to blind 3.9. Cords are threaded through slats and attached 3.10. Child safety mechanisms are selected and attached
4. Apply quality checks	4.1. Finished blinds are checked ensuring length, width, slat size and colour match work order 4.2. Finished blind is tested for correct operation 4.3. Parts of the work that do not comply with work order are repaired or reworked
5. Complete work	5.1. Finished work is cleaned, protected and stored following workplace practices 5.2. Tools and equipment are cleaned, maintained and stored 5.3. Faulty tools and equipment are reported to

ELEMENT	PERFORMANCE CRITERIA
	appropriate personnel 5.4. Work area is cleaned and <i>waste</i> is disposed of according to workplace practices 5.5. <i>Workplace documentation</i> is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate with site supervisor to:
 - confirm work orders and instructions
 - identify problems
 - report outcomes of constructing plastic and timber Venetian-style blinds
- work with others and in a team to construct plastic and timber Venetian-style blinds
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- participate in establishing new ideas and work specifications for constructing plastic and timber Venetian-style blinds
- plan and organise own work, including preparation and layout of work area and obtaining equipment and materials to avoid backtracking
- follow workplace induction principles
- accurately plan and organise own work activities
- adapt to new skill requirements
- use workplace technology related to constructing plastic and timber Venetian-style blinds, including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for constructing plastic and timber Venetian-style blinds
- organisational and workplace standards, requirements, policies and procedures for constructing plastic and timber Venetian-style blinds
- reading and interpreting workplace documents including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types of tools and equipment used to construct plastic and timber Venetian-style blinds and procedures for their safe use, operation and maintenance
- set up, operation and maintenance of static machines
- terms used to describe components of plastic and timber Venetian-style blinds
- characteristics of plastic and timber used in the construction of Venetian-style blinds
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• mathematical techniques for estimation and measurement of materials |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks in constructing plastic and timber Venetian-style blinds
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in constructing plastic and timber Venetian-style blinds
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Construct a minimum of two plastic Venetian-style blinds and two timber Venetian-style blinds. Task is to include selecting materials and hardware, cutting slats, punching and finishing slats, assembling blind including head and bottom rail components and tilt mechanisms, cleaning, packaging and storing finished blinds

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace environment
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills, may be conducted in work based and off site contexts
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to constructing plastic and timber style venetian blinds
 - workplace practices including standard operating procedures, spacing charts and work instructions for constructing plastic and timber style venetian blinds

EVIDENCE GUIDE

Method of assessment

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills

Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> includes Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> includes applicable legislation from all levels of government that affect organisational operation. Requirements may include award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Workplace practices	<ul style="list-style-type: none"> includes legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines), tolerances, following manufacturer instructions and specifications
Personal protective equipment	<ul style="list-style-type: none"> may include safety glasses/goggles, hearing protection, safety footwear, protective clothing, respiratory protection
Work order	<ul style="list-style-type: none"> includes customer order forms, job cards and quotations for work, worksheets specifications, including design, size, colour and quantity

RANGE STATEMENT	
Appropriate personnel	<ul style="list-style-type: none"> may include supervisors, suppliers, clients, colleagues and managers or any person responsible for your work activity
Materials	<ul style="list-style-type: none"> may include plastic and timber
Hardware and fixings	<ul style="list-style-type: none"> may include ladder braid, cord, head rails, rollers, cord locks, tilt mechanisms, tilt rods, wands, acorns, trumpets, motors
Punched	<ul style="list-style-type: none"> may involve use of single or multi stage punching machines
Finished	<ul style="list-style-type: none"> may include lacquering, oiling, painting, staining
Head rail components	<ul style="list-style-type: none"> include rollers, cord lock, tilt mechanisms
Manufacturer instructions	<ul style="list-style-type: none"> may be written instruction booklets or instructions on the hardware or packaging
Correct spacing	<ul style="list-style-type: none"> according to spacing charts for Venetian-style blinds
Work instructions	<ul style="list-style-type: none"> includes instructions for the construction of plastic or timber Venetian- style blinds
Child safety mechanisms	<ul style="list-style-type: none"> as required by legislation or code of practice
Tested	<ul style="list-style-type: none"> within limits of correct operation
Waste	<ul style="list-style-type: none"> may include plastic, metal, timber waste removal should be in accordance with workplace practices and environmental legislation covering disposal of industrial waste
Documentation	<ul style="list-style-type: none"> may include time sheets, customer care cards, work orders, reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA2009A Construct aluminium Venetian-style blinds

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to construct aluminium Venetian-style blinds
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to construct aluminium Venetian-style blinds. The unit applies in a workplace environment and may be conducted in small to large scale enterprises.</p> <p>Applications may include some complex or non routine activities involving individual responsibility or autonomy and collaboration with others through members of groups or teams</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish work requirements and prepare for work	1.1. OHS requirements, legislative requirements and workplace practices are observed throughout the work 1.2. Personal protective equipment is selected and used 1.3. Work orders are checked and confirmed 1.4. Tools and equipment are selected and checked for safe operation 1.5. Aluminium coil stock, hardware and fixings are selected and checked against work order
2. Assemble blind	2.1. Head and bottom rails are selected, measured and cut 2.2. Cords and ladder braids are selected, cut and attached to head rail 2.3. Hardware is attached to head and bottom rails 2.4. Venetian blind machine is set up according to manufacturer instructions 2.5. Headrail is attached to VVB machine 2.6. VVB machine is run to cut, punch and attach slats to head rail 2.7. Blind is placed on hoist and bottom rail installed 2.8. Ladders are crimped to final blind size 2.9. Finishing hardware is installed 2.10. Child safety mechanisms are selected and attached
3. Apply quality checks	3.1. Finished blinds are checked ensuring length and width match work order 3.2. Finished blind is tested for correct operation 3.3. Parts of the work that do not comply with work order are repaired or reworked
4. Complete work	4.1. Finished work is cleaned, protected and stored following workplace practices 4.2. Tools and equipment are cleaned, maintained and stored 4.3. Faulty tools and equipment are reported to appropriate personnel 4.4. Work area is cleaned and waste is disposed of according to workplace procedures 4.5. Workplace documentation or reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate with site supervisor to:
 - confirm work orders and instructions
 - identify problems
 - report outcomes of constructing aluminium Venetian-style blinds
- work with others and in a team to construct aluminium Venetian-style blinds
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- participate in establishing new ideas and work specifications for constructing aluminium Venetian-style blinds
- plan and organise own work including preparation and layout of work area and obtaining equipment and materials to avoid backtracking
- follow workplace induction principles
- accurately plan and organise own work activities
- adapt to new skill requirements
- use workplace technology related to constructing aluminium Venetian-style blinds including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for constructing aluminium Venetian-style blinds
- organisational and workplace standards, requirements, policies and procedures for constructing aluminium Venetian-style blinds
- reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types of tools and equipment used to construct aluminium Venetian-style blinds and procedures for their safe use, operation and maintenance
- terms used to describe components of aluminium Venetian-style blinds
- characteristics of aluminium used for constructing Venetian-style blinds
- set up, operation and maintenance of static machines used in the construction of aluminium Venetian-style blinds
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- mathematical techniques for estimation and measurement of materials

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks in constructing aluminium Venetian-style blinds
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in constructing aluminium Venetian-style blinds
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Set up, operate and maintain static machines used in the construction of aluminium Venetian-style blinds
- Construct a minimum of two aluminium Venetian-style blinds using two different head box assemblies. task to include selecting materials and hardware, setting up and operating Venetian blind machine, assembling blind, cleaning packaging and storing finished blind, cleaning work area and completing workplace documentation and reports.

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills, may be conducted in workplace and a simulated workplace environment
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to constructing aluminium Venetian-style blinds
 - workplace practices including standard operating procedures and work instructions for constructing

EVIDENCE GUIDE	
	aluminium Venetian-style blinds
Method of assessment	<p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills</p> <p>Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements	<ul style="list-style-type: none"> includes Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> includes applicable legislation from all levels of government that affect organisational operation. Requirements may include award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Workplace practices	<ul style="list-style-type: none"> include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines), tolerances, following manufacturer's instructions and specifications
Personal protective equipment	<ul style="list-style-type: none"> includes safety glasses/goggles, hearing protection, safety footwear, protective clothing, respiratory protection
Work orders	<ul style="list-style-type: none"> includes customer order forms, job cards, quotations for work, worksheets specifications, including design, size, colour and quantity

RANGE STATEMENT	
Coil stock	<ul style="list-style-type: none"> • may be solid or perforated
Hardware and fixings	<ul style="list-style-type: none"> • head box components as specified by manufacturer, ladder braid, cord, head rails, rollers, cord locks, tile mechanisms, tilt rods, wands, acorns, trumpets
Tools and equipment	<ul style="list-style-type: none"> • include pliers, scissors, cord threading needle
Work instructions	<ul style="list-style-type: none"> • includes instructions for the machining of the coil stock and construction of the blind
Venetian blind machine	<ul style="list-style-type: none"> • machine that crowns, runs and punches the aluminium coilstock. It automatically feeds the slat through the string tapes at each individual level.
Manufacturer instructions	<ul style="list-style-type: none"> • may be written instruction booklets, instructions on the machine or verbal instructions on correct use
Child safety mechanisms	<ul style="list-style-type: none"> • as required by legislation or code of practice
Tested	<ul style="list-style-type: none"> • within limits of normal operation
Appropriate personnel	<ul style="list-style-type: none"> • includes assessors, trainers, supervisors, team leader, maintenance officer or manager or any other person responsible for your work activity
Waste	<ul style="list-style-type: none"> • may include metal, cord and braids • waste removal should be in accordance with workplace practices and environmental legislation covering disposal of industrial waste
Workplace documentation	<ul style="list-style-type: none"> • may include time sheets, customer care cards, work orders, reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA2010A Construct metal louvre and canopy hooded style awnings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to construct fixed open, fixed closed and adjustable metal louvre and canopy hooded style awnings.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to construct metal louvre and canopy hooded style awnings. The unit applies in a workplace environment and may be conducted in small to large scale enterprises.</p> <p>Applications may include some complex or non routine activities involving individual responsibility or autonomy and collaboration with others through members of groups or teams.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare work	1.1. OHS requirements, legislative requirements and workplace practices are observed throughout the work 1.2. Personal protective equipment is selected and used 1.3. Work orders are checked and confirmed 1.4. Materials and hardware are selected and checked against work requirements. 1.5. Tools and equipment are selected and checked for safe operation
2. Cut stock and assemble awning	2.1. Metal stock is cut to manufacturer's recommendations 2.2. Metal is bent to form shape of awning 2.3. Awning is assembled to manufacturer specifications
3. Apply quality checks	3.1. Completed awnings are checked ensuring finished product matches work order 3.2. Completed awning is tested for correct operation 3.3. Parts of the work that do not comply with work order are repaired or reworked
4. Complete work	4.1. Finished work is cleaned, protected and stored following workplace practices 4.2. Tools and equipment are cleaned, maintained and stored 4.3. Faulty tools and equipment are reported to appropriate personnel 4.4. Work area is cleaned and waste is disposed of according to workplace practices 4.5. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate with site supervisor to:
 - confirm work orders and instructions
 - identify problems
 - report outcomes of constructing metal louvre and canopy hooded style awnings
- work with others and in a team to construct metal louvre and canopy hooded style awnings
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- participate in establishing new ideas and work specifications for constructing metal louvre and canopy hooded style awnings
- plan and organise own work including preparation and layout of work area and obtaining equipment and materials to avoid backtracking
- follow workplace induction principles
- accurately plan and organise own work activities
- adapt to new skill requirements
- use workplace technology related to constructing metal louvre and canopy hooded style awnings including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for constructing metal louvre and canopy hooded style awnings
- organisational and workplace standards, requirements, policies and procedures for constructing metal louvre and canopy hooded style awnings
- reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types of tools and equipment used to construct metal louvre and canopy hooded style awnings and procedures for their safe use, operation and maintenance
- terms used to describe components of metal louvre and canopy hooded style awnings
- characteristics of metals used in the construction of metal louvre and canopy hooded style awnings
- set up, operation and maintenance of static machines used in the construction of metal louvre and canopy hooded style awnings

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• mathematical techniques for estimation and measurement of materials |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks in constructing metal louvre and canopy hooded style awnings
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in constructing metal louvre and canopy hooded style awnings
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Construct one metal louvred awnings and one metal canopy hooded awning. Task is to include selecting materials and hardware, machining material as required by manufacturer of metal stock, assembling awnings, cleaning, packaging and storing awnings, cleaning work area, maintaining and storing equipment and completing workplace documentation and reports.

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills may be conducted in workplace or simulated workplace environment
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to constructing metal louvre and canopy hooded style awnings
 - workplace practices including standard operating procedures and work instructions for constructing

EVIDENCE GUIDE	
	metal louvre and canopy hooded style awnings
Method of assessment	<p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills</p> <p>Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> include Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> include applicable legislation from all levels of government that affect organisational operation. Requirements may include award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Workplace practices	<ul style="list-style-type: none"> include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines), tolerances, following manufacturer instructions and specifications
Personal protective equipment	<ul style="list-style-type: none"> includes safety glasses/goggles, hearing protection, safety footwear, protective clothing, respiratory protection
Work orders	<ul style="list-style-type: none"> include quotations for work, job cards, customer orders, worksheets specifications including design, size, colour and quantity

RANGE STATEMENT	
Material	<ul style="list-style-type: none"> may include aluminium, steel panels and stringers
Hardware	<ul style="list-style-type: none"> may include rivets, screws,
Tools and equipment	<ul style="list-style-type: none"> may include drills, pop rivet guns, screw guns, guillotine, panel saws, benders, shears
Manufacturer specifications	<ul style="list-style-type: none"> may include written or verbal specifications
Tested	<ul style="list-style-type: none"> within limits of normal operation
Appropriate personnel	<ul style="list-style-type: none"> includes assessor, trainer, supervisor, team leader, maintenance officer or manager or any other person responsible for your work activity
Waste	<ul style="list-style-type: none"> may include textiles, metal, timber
Workplace documentation	<ul style="list-style-type: none"> may include time sheets, customer care cards, work orders reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFBA2011A Construct aluminium roll up style awnings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to construct aluminium roll up style awnings for exterior applications
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to construct aluminium roll up style awnings. The unit applies in a workplace environment and may be conducted in small to large scale enterprises.</p> <p>Applications may include some complex or non routine activities involving individual responsibility or autonomy and collaboration with others through members of groups or teams</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish work requirements and prepare for work	1.1. OHS requirements, legislative requirements and workplace practices are observed throughout the work 1.2. Personal protective equipment is selected and used 1.3. Work orders are checked and confirmed 1.4. Tools and equipment are selected and checked for safe operation 1.5. Aluminium stock and hardware is selected and checked against work requirements.
2. Cut materials ready for assembly	2.1. Hoodbox, roller and bottom rail are cut 2.2. Spring is selected according to manufacturer specifications 2.3. Aluminium panels are cut 2.4. Measurements are checked against work order
3. Construct awning	3.1. Aluminium panels are joined to form awning skin 3.2. Roller and bottom rail are installed to skin 3.3. Spring and pin end are fitted to roller 3.4. End caps and pull ring are installed to bottom rail
4. Apply quality checks	4.1. Completed awnings are checked ensuring finished product matches work order 4.2. Finished blind is tested for correct operation 4.3. Parts of the work that do not comply with work order are repaired or reworked
5. Complete work	5.1. Arms and fittings are selected ready for installation 5.2. Finished work is cleaned, packaged with installation hardware and stored following workplace practices 5.3. Tools and equipment are cleaned, maintained and stored 5.4. Faulty tools and equipment are reported to appropriate personnel 5.5. Work area is cleaned and waste is disposed of according to workplace procedures 5.6. Workplace documentation or reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate with site supervisor to:
 - confirm work orders and instructions
 - identify problems
 - report outcomes of constructing aluminium roll up style awnings
- work with others and in a team to construct aluminium roll up style awnings
- use pre-checking and inspection techniques to anticipate production problems, avoid reworking and wastage
- participate in establishing new ideas and work specifications for constructing aluminium roll up style awnings
- plan and organise own work, including preparation and layout of work area and obtaining equipment and materials to avoid backtracking
- follow workplace induction principles
- accurately plan and organise own work activities
- adapt to new skill requirements
- use workplace technology related to construct aluminium roll up style awnings, including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for constructing aluminium roll up style awnings
- organisational and workplace standards, requirements, policies and procedures for constructing aluminium roll up style awnings
- reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types of tools and equipment used to construct aluminium roll up style awnings and procedures for their safe use, operation and maintenance
- terms used to describe components of aluminium roll up style awnings
- characteristics of aluminium used in the construction of roll up style awnings
- set up, operation and maintenance of static machines used in the construction of aluminium roll up style awnings
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- mathematical techniques for estimation and measurement of materials

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks in constructing aluminium roll up style awnings
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in constructing aluminium roll up style awnings
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Construct a minimum of two aluminium roll up style awnings. Task is to include selecting materials, cutting aluminium panels, preparing hardware, constructing awning skin, applying hardware, cleaning, packaging and storing completed awning, cleaning work area, maintaining and storing tools and equipment, completing workplace documentation

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills may be conducted in workplace or simulated workplace environments
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to constructing aluminium roll up style awnings
 - workplace practices including standard operating procedures and work instructions for constructing aluminium roll up style awnings

EVIDENCE GUIDE

Method of assessment

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills

Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> include Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> include applicable legislation from all levels of government that affect organisational operation. Requirements may include award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Workplace practices	<ul style="list-style-type: none"> may include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines), tolerances, following manufacturer's instructions and specifications
Personal protective equipment	<ul style="list-style-type: none"> Personal protection needs may include safety glasses/goggles, hearing protection, safety footwear, protective clothing, respiratory protection
Work order	<ul style="list-style-type: none"> may include quotations for work, job cards, customer orders, worksheets specifications including design, size, colour

RANGE STATEMENT	
	and quantity
Hardware	<ul style="list-style-type: none"> may include screws, rivets, roller, bottom rail, hood box components, spring, pin end, pull ring, end caps, rivets
Tools and equipment	<ul style="list-style-type: none"> include guillotine, screw drivers, pop rivet gun,
Manufacturer instructions	<ul style="list-style-type: none"> may be written instruction booklets, instructions on the tools and equipment or instructions for correct usage
Joined	<ul style="list-style-type: none"> may include riveting or welding processes
Tested	<ul style="list-style-type: none"> within limits of correct operation
Appropriate personnel	<ul style="list-style-type: none"> includes assessor, trainer, supervisor, team leader, maintenance officer or manager or any other person responsible for your work activity
Waste	<ul style="list-style-type: none"> may include metal and hardware waste removal should be in accordance with workplace practices and environmental legislation covering disposal of industrial waste
Workplace documentation	<ul style="list-style-type: none"> may include time sheets, customer care cards, work orders

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA3001A Install interior blinds

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to install a variety of blinds in a range of interior situations
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to install interior blinds. The unit applies in an on-site environment and may be conducted in a small to large scale enterprises.</p> <p>Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify products, fittings and attachments to be used	1.1. Type of blind to be fitted and work order requirements are identified 1.2. Type of installation and access is identified from work order or site inspection 1.3. Mounting brackets, materials and tools are identified from work instructions and site inspection
2. Plan process for installing blinds	2.1. Customer is consulted to determine suitable day and time for installation 2.2. Equipment is identified to minimise risk of damage to customer's premises or injuries to self 2.3. Work sequence is planned in a logical order 2.4. Attachment process is planned to conform to quality requirements, maximise the appearance of the finished work and provide for the most economical use of materials and labour 2.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 2.6. Blind operating mechanism is set up and checked against manufacturer specifications and work instructions
3. Complete installation	3.1. Planned work sequence is followed 3.2. OHS requirements , including personal protection needs , are observed throughout the work 3.3. Blinds are fitted and tested for correct operation 3.4. Pellets, cord brackets and pulleys are fitted using appropriate hardware and adjusted to suit blind operation 3.5. Blind is checked for correct operation and adjusted or repaired if necessary 3.6. Customer is advised on correct operation of blind
4. Complete job and clean work area	4.1. Work site is cleaned and equipment is cleaned and stored according to workplace practices 4.2. Rubbish is cleared and waste collected for disposal or recycling as appropriate in accordance with workplace practices 4.3. Customer is presented with invoice, payment collected and receipt issued. 4.4. Workplace documentation is completed and filed

ELEMENT	PERFORMANCE CRITERIA
	according to workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- read and understand documentation
- speak clearly and directly
- apply effective listening techniques
- ask questions to gain information
- complete standardised workplace documentation
- provide information to customers
- work with others and in a team to install interior blinds
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- test systems and make adjustments
- select appropriate solutions to problems
- adapt to new situations
- discuss initiatives with colleagues
- initiate solutions to problems
- plan and organise own work, including preparation and planning of work and obtaining equipment and materials to avoid backtracking
- manage own time and prioritise own work
- assess own skills and knowledge
- take responsibility
- apply quality practices
- adapt to new skill requirements
- apply reflective skills
- use workplace technology related to installing interior blinds including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for installing interior blinds
- organisational and workplace requirements, policies and procedures for installing interior blinds
- reading and interpreting workplace documents including work orders, work instructions and manufacturer specifications
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types of tools and equipment used for installing interior blinds and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• types, uses, limitations and operating mechanisms of interior blinds• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• mathematical techniques for estimation and measurement of materials• procedures for presentation of invoices, collection and receipting of payments |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks in installing interior blinds
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in installing interior blinds
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Install a minimum of four different styles of interior blind in a range of on-site or simulated locations
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing interior blinds
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills may be conducted in workplace and simulated workplace environments
- The following resources should be made available:
 - installation site or simulated installation site
 - materials and equipment relevant to installing interior blinds
 - workplace practices including standard operating procedures and work instructions for installing interior blinds

EVIDENCE GUIDE**Method of assessment**

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills

Assessment methods must be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real and simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Type of blind	<ul style="list-style-type: none"> includes, but is not limited to romans, hollands, plastic Venetians, timber Venetians, aluminium Venetians, verticals
Work order	<ul style="list-style-type: none"> may include, but is not limited to quotations for work, job cards, customer orders
Type of installation	<ul style="list-style-type: none"> may include installations into timber, plasterboard, masonry, bay windows, corners and doors
Access	<ul style="list-style-type: none"> restrictions on access may determine equipment used
Site inspection	<ul style="list-style-type: none"> should be conducted in consultation with customer
Materials	<ul style="list-style-type: none"> include screws, nails, bolts, masonry anchors,
Tools	<ul style="list-style-type: none"> may include screwdrivers, hammers, drills, ladders,
Work instructions	<ul style="list-style-type: none"> includes instructions for the installation of different styles of internal blinds
Customer	<ul style="list-style-type: none"> may include home owners, real estate agents, tenants, body corporate representatives
Equipment	<ul style="list-style-type: none"> may include drop sheets, ladders,
Work sequence	<ul style="list-style-type: none"> should cover the steps for installation in a logical order to prevent back tracking
Operating mechanism	<ul style="list-style-type: none"> will be the operating mechanism appropriate to the style of blind being installed following manufacturer specifications and recommendations
OHS requirements	<ul style="list-style-type: none"> includes Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and

RANGE STATEMENT	
	risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Personal protection needs	<ul style="list-style-type: none"> includes safety glasses, hearing protection, respiratory protection, protective footwear
Manufacturer specifications	<ul style="list-style-type: none"> may be written or verbal specifications
Tested	<ul style="list-style-type: none"> within limitations of normal operation
Waste	<ul style="list-style-type: none"> may include textiles, metals, hardware, timber, masonry, plaster, dust waste removal should be in accordance with workplace practices and environmental legislation covering disposal of industrial waste
Payment	<ul style="list-style-type: none"> may include cash, cheque, credit card depending on workplace practices
Workplace Documentation	<ul style="list-style-type: none"> may include time sheets, customer care cards, work orders, reports, receipts and invoices

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA3002A Install exterior blinds and awnings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to install blinds and awnings in exterior locations
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to install exterior blinds and awnings. The unit applies in an on-site environment and may be conducted in a small to large scale enterprises.</p> <p>Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify products, fittings and attachments to be used	1.1. Type of <i>blind</i> or <i>awning</i> to be installed is identified 1.2. Installation <i>hardware, tools and equipment</i> are identified from <i>work instructions</i> and <i>site inspection</i> 1.3. <i>Customer</i> is consulted to determine day and time for installation 1.4. <i>Local government regulations</i> regarding installation of exterior blinds and awnings are checked and adhered to
2. Plan installation process	2.1. <i>OHS requirements</i> and <i>personal protection needs</i> are observed throughout the work 2.2. <i>Work order</i> is read and interpreted 2.3. <i>Work sequence</i> is planned in a logical order to suit job 2.4. <i>Work site</i> is checked to determine access and special equipment requirements,
3. Install exterior blind or awning	3.1. Public and property is <i>protected</i> 3.2. Product to be installed is laid out and checked against work order 3.3. Fixing hardware is installed to <i>manufacturer specifications</i> 3.4. Blind or awning is installed to manufacturer's specifications
4. Complete the installation	4.1. Operation of product is <i>tested</i> and adjusted if necessary 4.2. Customer is shown correct use of product
5. Clean work area	5.1. Tools and equipment are cleaned and stored according to workplace practices 5.2. Work area is cleaned and left in a safe condition 5.3. <i>Waste</i> and scrap are removed and disposed of or recycled as appropriate following workplace procedures 5.4. Invoice is issued to customer and <i>payment</i> received and receipted 5.5. <i>Workplace documentation</i> is completed.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- read and understand documentation
- speak clearly and directly
- apply effective listening techniques
- ask questions to gain information
- complete standardised workplace documentation
- provide information to customers
- work with others and in a team to install exterior blinds and awnings
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- test systems and make adjustments
- select appropriate solutions to problems
- adapt to new situations
- discuss initiatives with colleagues
- initiate solutions to problems
- plan and organise own work, including preparation and planning of work and obtaining equipment and materials to avoid backtracking
- manage own time and prioritise own work
- assess own skills and knowledge
- take responsibility
- apply quality practices
- adapt to new skill requirements
- apply reflective skills
- use workplace technology related to installing exterior blinds and awnings, including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for installing interior blinds
- organisational and site standards, requirements, policies and procedures for installing interior blinds
- reading and interpreting workplace documents including work orders, work instructions and manufacturer specifications
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types of tools and equipment used to install exterior blinds and awnings and procedures for their safe use, operation and maintenance
- types, uses, limitations and operating mechanisms of exterior blinds and awnings,

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <p>including special application brackets</p> <ul style="list-style-type: none">• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• mathematical techniques for estimation and measurement of materials• procedures for presentation of invoices, collection and receipting of payments |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks in installing interior blinds
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in installing interior blinds
- Select, set up and maintain equipment in accordance with manufacturer instructions and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing interior blinds
- Communicate effectively and work safely with others in the work area
- Install a minimum of four different styles of exterior blinds or awnings in a range of on-site or simulated locations

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills may be conducted in workplace and simulated workplace environments
- The following resources should be made available:
 - installation site or simulated installation site
 - materials and equipment relevant to installing exterior blinds and awnings
 - workplace practices including standard operating procedures and work instructions for installing

EVIDENCE GUIDE	
	exterior blinds and awnings
Method of assessment	<p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills</p> <p>Assessment methods must be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real and simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Blind	<ul style="list-style-type: none"> may include roll up style exterior blinds and pull down style exterior blinds
Awning	<ul style="list-style-type: none"> includes metal louvre style awnings, textile canopy style awnings, metal hooded canopy style awnings, aluminium roll up style awnings, folding arm style awnings
Hardware	<ul style="list-style-type: none"> includes screws, masonry anchors, dyna bolts, nuts and bolts, mounting brackets, hex screws
Tools and equipment	<ul style="list-style-type: none"> include screwdrivers, drills, hex keys
Work instructions	<ul style="list-style-type: none"> includes instructions for the installation of different styles of exterior blinds and awnings
Site inspection	<ul style="list-style-type: none"> should be conducted in consultation with customer
Customer	<ul style="list-style-type: none"> may include home owners, real estate agents, tenants, body corporate representatives, business owners
Local government regulations	<ul style="list-style-type: none"> in relation to exterior blind and awning installation and installation sites
OHS requirements	<ul style="list-style-type: none"> includes Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Personal protection needs	<ul style="list-style-type: none"> includes safety glasses, hearing protection, safety boots, sunscreen, hats,
Work order	<ul style="list-style-type: none"> includes quotations for work, job cards, customer orders
Work sequence	<ul style="list-style-type: none"> should cover the steps for installation in a logical order to prevent back tracking

RANGE STATEMENT	
Work site	<ul style="list-style-type: none"> work site may include construction sites, single storey and multi-storey dwellings and commercial premises, newly completed buildings
Protected	<ul style="list-style-type: none"> includes drop sheets, barriers, cones, signs
Manufacturer specifications	<ul style="list-style-type: none"> may be written or verbal specifications
Tested	<ul style="list-style-type: none"> within limitations of normal operation
Waste	<ul style="list-style-type: none"> includes textiles, metals, hardware, timber, masonry, fibro cement, concrete, treated pine waste removal should be in accordance with workplace practices and environmental legislation covering disposal of industrial waste
Payment	<ul style="list-style-type: none"> may include cash, cheque, credit card depending on workplace procedures
Workplace documentation	<ul style="list-style-type: none"> may include time sheets, customer care cards, work orders

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA3003A Install timber shutters

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to install timber shutters
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to install timber shutters. The unit applies in an on-site environment and may be conducted in small to large scale enterprises.</p> <p>Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify products, fittings and attachments to be used	1.1. Type of timber shutter to be installed is identified 1.2. Installation <i>hardware, tools and equipment</i> are identified from <i>work instructions</i> and <i>site inspection</i> 1.3. <i>Customer</i> is consulted to determine day and time for installation
2. Plan installation process	2.1. <i>OHS requirements</i> and <i>personal protection</i> needs are observed throughout the work 2.2. <i>Work order</i> is read and interpreted 2.3. <i>Work sequence</i> is planned in a logical order to suit job 2.4. <i>Work site</i> is checked to determine access, special equipment requirements 2.5. Product to be installed is laid out and checked against work order 2.6. Product to be installed is protected and transported to worksite without damage
3. Install timber shutters	3.1. Public and property is <i>protected</i> if necessary 3.2. Fixing hardware is installed to <i>manufacturer specifications</i> 3.3. Timber shutter is installed to manufacturer's specifications
4. Complete the installation	4.1. Operation of product is <i>tested</i> and adjusted if necessary 4.2. Customer is shown correct use of product
5. Clean work area	5.1. Tools and equipment are cleaned and stored according to workplace practices 5.2. Work area is cleaned and left in a safe condition 5.3. <i>Waste</i> and scrap are removed and disposed of or recycled as appropriate following workplace practices 5.4. Invoice is issued to customer and <i>payment</i> received and receipted 5.5. <i>Workplace documentation</i> is completed.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- read and understand documentation
- speak clearly and directly
- apply effective listening techniques
- ask questions to gain information
- complete standardised workplace documentation
- provide information to customers
- work with others and in a team to install interior blinds
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- test systems and make adjustments
- select appropriate solutions to problems
- adapt to new situations
- discuss initiatives with colleagues
- initiate solutions to problems
- plan and organise own work, including preparation and planning of work and obtaining equipment and materials to avoid backtracking
- manage own time and prioritise own work
- assess own skills and knowledge
- take responsibility
- apply quality practices
- adapt to new skill requirements
- apply reflective skills
- use workplace technology related to installing timber shutters including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for installing interior blinds
- organisational and workplace requirements, policies and procedures for installing timber shutters
- reading and interpreting workplace documents including work orders, work instructions and manufacturer specifications
- types of tools and equipment used to install timber shutters and procedures for their safe use, operation and maintenance
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• storage systems and labelling• types, uses and limitations of timber shutters• characteristics of timber and hardware used to construct and install timber shutters• procedures for the recording, reporting and maintenance of workplace records and information• mathematical techniques for estimation and measurement of materials• procedures for presentation of invoices, collection and receipting of payments |
|---|

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks in installing interior blinds
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in installing interior blinds
- Select, set up and maintain equipment in accordance with manufacturer instructions and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Install a minimum of four timber shutters in a range of on-site or simulated locations
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing interior blinds
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills may be conducted in workplace or simulated workplace environments
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to installing timber shutters
 - workplace practices, including standard operating procedures and work instructions for installing timber shutters

EVIDENCE GUIDE**Method of assessment**

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills

Assessment methods must be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real and simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Hardware	<ul style="list-style-type: none"> may include screws, masonry anchors, dyna bolts, nuts and bolts, mounting brackets, hinges, filler strips, cover strips, track systems
Tools and equipment	<ul style="list-style-type: none"> may includes, screwdrivers, docking saws, ladders, tape measure, power drill, scissors, caulking gun
Work instructions	<ul style="list-style-type: none"> includes instructions for the installation of different styles of timber shutters for both internal and external applications
Site inspection	<ul style="list-style-type: none"> should be conducted in consultation with customer
Customer	<ul style="list-style-type: none"> may include home owners, real estate agents, tenants, body corporate representatives, business owners
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Personal protection needs	<ul style="list-style-type: none"> may include safety glasses, hearing protection, safety boots, sunscreen, hats
Work order	<ul style="list-style-type: none"> may include quotations for work, job cards, customer orders
Work sequence	<ul style="list-style-type: none"> should cover the steps for installation in a logical order to prevent back tracking
Work site	<ul style="list-style-type: none"> work site may include construction sites, single storey and multi-storey dwellings and commercial premises, newly completed buildings

RANGE STATEMENT	
Protected	<ul style="list-style-type: none"> • may include drop sheets, barriers, cones, signs
Manufacturer specifications	<ul style="list-style-type: none"> • may be written or verbal specifications
Tested	<ul style="list-style-type: none"> • within limitations of normal operation
Waste	<ul style="list-style-type: none"> • may include textiles, metals, hardware, timber, masonry, fibro cement, concrete, treated pine • waste removal should be in accordance with workplace practices and environmental legislation covering disposal of industrial waste
Payment	<ul style="list-style-type: none"> • may include cash, cheque, credit card depending on workplace practices
Workplace documentation	<ul style="list-style-type: none"> • may include time sheets, customer care cards, work orders, reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA3004A Construct folding arm style awnings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to construct folding arm style awnings for exterior applications
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to construct folding arm style awnings. The unit applies in a workplace environment and may be conducted in small to large scale enterprises.</p> <p>Applications may involve some responsibility for others. Participation in teams, including group or team coordination may be involved.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish work requirements and prepare for work	1.1. OHS requirements, legislative requirements and workplace practices are observed throughout the work 1.2. Personal protective equipment is selected and used 1.3. Work order requirements are checked and confirmed 1.4. Tools and equipment are selected and checked for safe operation 1.5. Material and hardware is selected and checked against work requirements. 1.6. Material is checked for flaws
2. Cut materials ready for assembly	2.1. Folding arms are selected following work order and workplace practices 2.2. Roller, front rail and square head rail are cut 2.3. Correct side of material and pattern direction is identified 2.4. Material for skin is laid out 2.5. Material is marked and cut 2.6. Material is joined to form awning skin 2.7. Measurements are checked against work order
3. Construct awning	3.1. Arm assembly is constructed following manufacturer instructions 3.2. Roller and front rail are attached to skin 3.3. Skin is fitted to arm assembly
4. Apply quality checks	4.1. Completed awnings are checked ensuring finished product matches work order 4.2. Completed awning is tested to ensure correct and safe operation 4.3. Parts of the work that do not comply with work order are repaired or re-worked
5. Complete work	5.1. Finished work is cleaned, packaged with installation hardware and stored following workplace practices 5.2. Tools and equipment are cleaned, maintained and stored 5.3. Faulty tools and equipment are reported to appropriate personnel 5.4. Work area is cleaned and waste is disposed of according to workplace procedures 5.5. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- read and understand documentation
- ask questions to gain information
- complete standardised workplace documentation
- work with others and in a team to construct folding arm style awnings
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- test systems and make adjustments
- select appropriate solutions to problems
- adapt to new situations
- discuss initiatives with colleagues
- initiate solutions to problems
- plan and organise own work, including preparation and planning of work and obtaining equipment and materials to avoid backtracking
- manage own time and prioritise own work
- assess own skills and knowledge
- take responsibility
- apply quality practices
- adapt to new skill requirements
- apply reflective skills
- use workplace technology related to constructing folding arm style awnings including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for constructing folding arm style awnings
- organisational and site standards, requirements, policies and procedures for constructing folding arm style awnings
- reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types of tools and equipment and procedures for their safe use, operation and maintenance
- terms used to describe components of folding arm style awnings
- characteristics of materials used to construct folding arm style awnings
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and

REQUIRED SKILLS AND KNOWLEDGE

information

- | |
|---|
| <ul style="list-style-type: none">• mathematical techniques for estimation and measurement of materials |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks in constructing folding arm style awnings
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in constructing folding arm style awnings
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Construct a minimum of two folding arm style awnings. Task is to include constructing the arm assembly, preparing skin, assembling awning, cleaning, packaging and storing completed awning, cleaning work area and completing workplace documentation

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills may be conducted in workplace and simulated workplace environments
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to constructing folding arm style awnings
 - workplace practices including standard operating procedures and work instructions for constructing folding arm style awnings

Method of assessment

Assessment methods must confirm consistency and

EVIDENCE GUIDE

	<p>accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills</p> <p>Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Workplace practices

- may include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines), tolerances, following manufacturer instructions and specifications

Personal protection needs

- includes safety glasses/goggles, hearing protection, safety footwear, protective clothing and head wear, respiratory protection

Work order

- includes quotations for work, job cards, customer orders
- specifications including design, size, colour

RANGE STATEMENT	
	and quantity
Tools and equipment	<ul style="list-style-type: none"> includes hex keys, drills (power or battery), drill bits, hammer, socket set
Material	<ul style="list-style-type: none"> includes canvas, acrylic, PVC mesh
Hardware	<ul style="list-style-type: none"> includes roller, front rail, square bar, end caps, end brackets, gear box or electric motor, nuts, bolts, extendable arms
Folding arms	<ul style="list-style-type: none"> may be straight or cross-over style
Laid out	<ul style="list-style-type: none"> material should be laid out flat and square on a cutting table large enough to take full width of material
Marked	<ul style="list-style-type: none"> material may be marked using chalk, markers or pencil
Joined	<ul style="list-style-type: none"> may include sewing or welding processes
Manufacturer instructions	<ul style="list-style-type: none"> may be written instruction booklets or instructions on the hardware or packaging
Tested	<ul style="list-style-type: none"> within the limitations of normal operation
Appropriate personnel	<ul style="list-style-type: none"> includes supervisor, team leader, maintenance officer or manager, or any other person responsible for your work activity
Waste	<ul style="list-style-type: none"> may include textiles, metal, hardware waste removal should be in accordance with workplace practices and environmental legislation covering disposal of industrial waste
Workplace documentation	<ul style="list-style-type: none"> may include time sheets, customer care cards, work orders, reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA3005A Construct framework for canopy- style awnings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to construct the steel or aluminium framework for canopy-style awnings.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to construct the framework for canopy-style awnings. The unit applies in a workplace and on-site environment and may be conducted in a small to large scale enterprises.</p> <p>Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish work requirements and prepare for work	1.1. OHS requirements, legislative requirements and workplace practices are observed throughout the work 1.2. Personal protective equipment is selected and used 1.3. Tools and equipment are selected and checked for safe operation 1.4. Work order requirements are checked and confirmed
2. Fabricate framework	2.1. Material and hardware is selected and checked against work order 2.2. Frame is fabricated according to work instructions 2.3. Fixing points are incorporated into frame fabrication 2.4. Measurements are checked against work order
3. Assemble framework	3.1. Frame is assembled according to manufacturer instructions and workplace practices 3.2. Frame is braced 3.3. Frame is finished according to work order and workplace practices 3.4. Splines for attaching cloth are cut
4. Apply quality checks	4.1. Completed framework is checked ensuring finished product matches work order 4.2. Parts of the work that do not comply with work order are repaired.
5. Complete work	5.1. Finished work is cleaned, packaged and stored following workplace practices 5.2. Tools and equipment are cleaned, maintained and stored 5.3. Faulty tools and equipment are reported to appropriate personnel 5.4. Work area is cleaned and waste is disposed of according to workplace procedures 5.5. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- read and understand documentation
- ask questions to gain information
- complete standardised workplace documentation
- work with others and in a team to construct framework for canopy-style awnings
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- test systems and make adjustments
- select appropriate solutions to problems
- adapt to new situations
- discuss initiatives with colleagues
- initiate solutions to problems
- plan and organise own work, including preparation and planning of work and obtaining equipment and materials to avoid backtracking
- manage own time and prioritise own work
- assess own skills and knowledge
- take responsibility
- apply quality practices
- adapt to new skill requirements
- apply reflective skills
- use workplace technology related to constructing framework for canopy style awnings, including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for constructing metal awnings frames
- organisational and workplace standards, requirements, policies and procedures for constructing framework for canopy style awnings
- environmental protection requirements relating to the disposal of waste material
- established lines of communications and workplace protocols
- problem identification and resolution
- types of tools and equipment used in constructing framework for canopy style awnings and procedures for their safe use, operation and maintenance
- characteristics of aluminium and steel used in constructing framework for canopy style awnings
- computer programs
- cutting patterns and sequences

REQUIRED SKILLS AND KNOWLEDGE

- | |
|--|
| <ul style="list-style-type: none">• cutting tool condition including sharpness, straightness and suitability for task• industry standards for framing steel and aluminium• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• mathematical procedures for estimation and measurement |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks in constructing framework for canopy style awnings
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in constructing framework for canopy style awnings
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Construct a minimum two frameworks for canopy style awning. Task is to include selecting tools, equipment and materials, fabricating and/or assembling to framework, finishing the framework, applying quality checks, packaging and storing framework, maintaining and storing tools and equipment, cleaning work area and completing workplace documentation.

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills may be conducted in workplace or simulated workplace environments
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to constructing framework for canopy style awnings
 - workplace practices including standard operating procedures and work instructions for constructing

EVIDENCE GUIDE	
	canopy style awnings
Method of assessment	<p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills</p> <p>Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> include Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may the use of personal protective equipment, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> include applicable legislation from all levels of government that affect organisational operation. Requirements may include award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Workplace practices	<ul style="list-style-type: none"> include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines), tolerances, following manufacturer instructions and specifications
Personal protective equipment	<ul style="list-style-type: none"> includes safety glasses/goggles, hearing protection, safety footwear, protective clothing and head wear, respiratory protection
Tools and equipment	<ul style="list-style-type: none"> include calculators, pop rivet gun, screwdrivers, hack saws, socket set, hand grinder, hammers, files, tin snips, spanners, level, square, measuring tape, hex keys, tap

RANGE STATEMENT	
	and die sets, straight edges, pipe bender, bench grinders, hammer drills, cordless screwdriver/drill, air drills, jig saws, circular saws
Work order	<ul style="list-style-type: none"> includes quotations for work, job cards, customer orders specifications including design, size, colour and quantity
Manufacturer instructions	<ul style="list-style-type: none"> may be written instruction booklets, instructions on the tools or equipment or instructions for correct use
Material	<ul style="list-style-type: none"> may be aluminium or steel
Hardware	<ul style="list-style-type: none"> includes nuts and bolts
Work instructions	<ul style="list-style-type: none"> includes instructions for constructing steel frames and aluminium frames
Measurements	<ul style="list-style-type: none"> includes final size of frame, gauge of fabricating metal
Finished	<ul style="list-style-type: none"> may be aluminium, powder coated, hot dipped galvanised, painted
Appropriate personnel	<ul style="list-style-type: none"> includes assessor, trainer, supervisor, team leader, maintenance officer or manager or any other person responsible for your work activity
Waste	<ul style="list-style-type: none"> includes metals (aluminium, steel) hardware waste removal should be in accordance with workplace practices and environmental legislation covering disposal of industrial waste
Workplace documentation	<ul style="list-style-type: none"> may include time sheets, customer care cards, work orders, reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA3006A Construct pleated style blinds

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to construct pleated style blinds
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to construct pleated style blinds. The unit applies in a workplace environment and may be conducted in small to large scale enterprises.</p> <p>Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish work requirements and prepare for work	1.1. OHS requirements, legislative requirements and workplace practices are observed throughout the work 1.2. Personal protective equipment is selected and checked 1.3. Work order requirements are checked and confirmed 1.4. Tools and equipment are selected and checked for safe operation 1.5. Fabric is selected from stock and checked against work order 1.6. Fabric is checked for flaws 1.7. Hardware is selected and checked against work order
2. Lay out, mark and cut fabrics	2.1. Correct side of fabric, naps, direction of pattern and pattern matches are identified 2.2. Allowances are calculated and recorded 2.3. Fabric is laid out 2.4. Fabric is marked 2.5. Fabric is cut following workplace practices
3. Construct blind	3.1. Fabric is joined or trimmed to required width 3.2. Pleats are formed in fabric according to workplace practices 3.3. Cord holes are punched in fabric 3.4. Bottom of blind is finished according to work order 3.5. Head and bottom rail are cut to required length 3.6. Blind is assembled according to work instructions 3.7. Cords are cut and attached following work instructions 3.8. Child safety mechanisms are selected and attached
4. Apply quality checks	4.1. Finished blinds are checked that end finishing and final length of finished blinds match work requirements 4.2. Finished blind is tested for correct operation 4.3. Parts of the work that do not comply with work order are repaired or re-worked
5. Complete work	5.1. Finished work is cleaned, protected and stored following workplace practices 5.2. Tools and equipment are cleaned, maintained and

ELEMENT	PERFORMANCE CRITERIA
	<p>stored</p> <p>5.3. Faulty tools and equipment are reported to <i>appropriate personnel</i></p> <p>5.4. Work area is cleaned and <i>waste</i> is disposed of according to workplace practices</p> <p>5.5. <i>Workplace documentation</i> is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- read and understand documentation
- ask questions to gain information
- complete standardised workplace documentation
- work with others and in a team to construct folding arm style awnings
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- test systems and make adjustments
- select appropriate solutions to problems
- adapt to new situations
- discuss initiatives with colleagues
- initiate solutions to problems
- plan and organise own work, including preparation and planning of work and obtaining equipment and materials to avoid backtracking
- manage own time and prioritise own work
- assess own skills and knowledge
- take responsibility
- apply quality practices
- adapt to new skill requirements
- apply reflective skills
- use workplace technology related to constructing pleated style blinds including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for constructing pleated style blinds
- organisational and workplace standards, requirements, policies and procedures for constructing pleated style blinds
- environmental protection requirements relating to the disposal of waste material
- established communication channels and workplace/worksites protocols
- problem identification and resolution
- types of tools and equipment used in the construction of pleated style blinds and procedures for their safe use, operation and maintenance
- characteristics of fabrics used to construct pleated style blinds
- cutting patterns and sequences
- cutting tool condition including sharpness, straightness and suitability for task
- industry standards for fabric widths

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• terms used to describe components of pleated style blinds• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks in constructing pleated blinds
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in constructing pleated blinds
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Cut fabrics accurately according to work order
- Construct a minimum of two pleated blinds

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills may be conducted in workplace or simulated workplace environments
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to constructing pleated blinds
 - workplace practices including standard operating procedures and work instructions for constructing pleated blinds

Method of assessment

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills

EVIDENCE GUIDE

Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> include Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> include applicable legislation from all levels of government that affect organisational operation. Requirements may include award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Workplace practices	<ul style="list-style-type: none"> may include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines), tolerances, following manufacturer instructions and specifications
Personal protection needs	<ul style="list-style-type: none"> includes safety glasses/goggles, hearing protection, safety footwear, protective clothing and head wear, respiratory protection
Work order	<ul style="list-style-type: none"> includes quotations for work, job cards, customer orders specifications including design, size, colour

RANGE STATEMENT	
	and quantity
Tools and equipment	<ul style="list-style-type: none"> includes cutting bench, shears, knives, cut off saws, sewing machines, needles, welding equipment, glue guns, heat set machines,
Fabric	<ul style="list-style-type: none"> includes polyester blends, metalized, dim out, flame retardant, solar protected
Hardware	<ul style="list-style-type: none"> includes guide wires, operation mechanisms (crank and motor), cord, trumpets, remote control
Allowances	<ul style="list-style-type: none"> may be for hardware, joins, hems
Laid out	<ul style="list-style-type: none"> fabric should be laid out flat and square on a cutting bench large enough to take the full width of the fabric
Marked	<ul style="list-style-type: none"> fabric may be marked using chalk, markers or pencil
Joined	<ul style="list-style-type: none"> may include sew, weld or glue
Work instructions	<ul style="list-style-type: none"> includes instructions for the construction of pleated style blinds
Child safety mechanisms	<ul style="list-style-type: none"> as required by legislation or code of practice
Tested	<ul style="list-style-type: none"> within limits of normal operation
Appropriate personnel	<ul style="list-style-type: none"> includes assessors, trainer, supervisor, team leader, maintenance officer or manager, or any other person responsible for your work activity
Waste	<ul style="list-style-type: none"> may include textiles, hardware waste removal should be in accordance with workplace practices and environmental legislation covering disposal of industrial waste
Workplace documentation	<ul style="list-style-type: none"> may include time sheets, customer care cards, work orders, reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA3007A Construct wood weave style blinds

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to construct wood weave style blinds
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to construct wood weave style blinds. The unit applies in a workplace environment and may be conducted in small to large scale enterprises.</p> <p>Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish work requirements and prepare for work	1.1. OHS requirements, legislative requirements , and workplace practices are observed throughout the work 1.2. Personal protective equipment is selected and used 1.3. Style of blind is identified from work order 1.4. Tools and equipment are selected and checked for safe operation 1.5. Materials are selected from stock and checked against work requirements 1.6. Materials are checked for flaws
2. Lay out, mark and cut materials	2.1.1. Material is laid out and marked 2.1.2. Material is cut
3. Construct blind	3.1. Wood is woven to form skin of blind 3.2. Head and bottom rails are attached to blind 3.3. Cords are attached to blind 3.4. Blind is finished according to work instructions 3.5. Child safety mechanisms are selected and attached
4. Apply quality checks	4.1. Finished blinds are checked ensuring end finishing and final length of finished blinds match work requirements 4.2. Finished blind is tested for correct operation 4.3. Parts of the work that do not comply with work order are repaired or re-worked
5. Complete work	5.1. Finished work is protected and stored following workplace practices 5.2. Tools and equipment are cleaned, maintained and stored 5.3. Faulty tools and equipment are reported to appropriate personnel 5.4. Work area is cleaned and waste is disposed of according to workplace procedures 5.5. Workplace documentation or reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- read and understand documentation
- ask questions to gain information
- complete standardised workplace documentation
- work with others and in a team to construct folding arm style awnings
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- test systems and make adjustments
- select appropriate solutions to problems
- adapt to new situations
- discuss initiatives with colleagues
- initiate solutions to problems
- plan and organise own work, including preparation and planning of work and obtaining equipment and materials to avoid backtracking
- manage own time and prioritise own work
- assess own skills and knowledge
- take responsibility
- apply quality practices
- adapt to new skill requirements
- apply reflective skills
- use workplace technology related to constructing folding arm style awnings, including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for constructing wood weave blinds
- organisational and workplace standards, requirements, policies and procedures for constructing wood weave blinds
- reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types of tools and equipment used to construct wood weave blinds and procedures for their safe use, operation and maintenance
- terms used to describe components of wood weave style blinds
- characteristics of timber used in wood weave style blinds
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and

REQUIRED SKILLS AND KNOWLEDGE

information

- | |
|---|
| <ul style="list-style-type: none">• mathematical techniques for estimation and measurement of materials |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks in constructing wood weave style blinds
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in constructing wood weave style blinds
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Cut wood accurately according to work order
- Construct a minimum of two wood weave style blinds; one roman style, one roll up style

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills may be conducted in workplace or simulated workplace environments
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to constructing wood weave blinds
 - workplace practices including standard operating procedures and work instructions for constructing wood weave blinds

Method of assessment

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of

EVIDENCE GUIDE

required knowledge and skills

Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> include Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> include applicable legislation from all levels of government that affect organisational operation. Requirements may include award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Workplace practices	<ul style="list-style-type: none"> may include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines), tolerances, following manufacturer instructions and specifications
Personal protective equipment	<ul style="list-style-type: none"> includes safety glasses/goggles, hearing protection, safety footwear, protective clothing and head wear, respiratory protection
Style	<ul style="list-style-type: none"> may be roman or roll up style
Work order	<ul style="list-style-type: none"> includes quotations for work, job cards, customer orders

RANGE STATEMENT	
	<ul style="list-style-type: none"> specifications including design, size, colour and quantity
Materials	<ul style="list-style-type: none"> includes threads, bamboo, basswood
Tools and equipment	<ul style="list-style-type: none"> includes saws, needles, cutting bench,
Laid out	<ul style="list-style-type: none"> wood should be laid out flat and square on a cutting bench large enough to take the full width of the wood
Work instructions	<ul style="list-style-type: none"> includes instructions for constructing wood weave roman style blinds and wood weave roll up style blinds
Child safety mechanisms	<ul style="list-style-type: none"> as required by legislation or code of practice
Tested	<ul style="list-style-type: none"> within limits of normal operation
Appropriate personnel	<ul style="list-style-type: none"> includes assessors, trainers, supervisors, maintenance officer or manager or any other person responsible for your work activity
Waste	<ul style="list-style-type: none"> may include wood, hardware waste removal should be in accordance with workplace practices and environmental legislation covering disposal of industrial waste
Workplace documentation	<ul style="list-style-type: none"> may include time sheets, customer care cards, work orders, reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFBA3008A Construct pelmets

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to cut, prepare and assemble pelmet components for internal blind installations.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to construct pelmets. The unit applies in a workplace and on-site environment and may be conducted in small to large scale enterprises.</p> <p>Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for work	1.1. OHS requirements, legislative requirements and workplace practices are observed throughout the work 1.2. Personal protective equipment is selected and used 1.3. Type of pelmet to be constructed is identified from work order 1.4. Tools and equipment are selected and checked for safe operation 1.5. Materials and hardware are identified and selected 1.6. Work sequence is planned to conform with quality requirements, minimise time and economically use materials
2. Prepare pelmet components	2.1. Components are measured and cut to specification 2.2. Components are laid out ready for assembly
3. Assemble pelmet components	3.1. Components are assembled according to work instructions 3.2. Problems occurring during work operations are identified and reported following workplace practices
4. Complete work	4.1. Completed work is cleaned, packaged and stored according to workplace practices 4.2. Tools and equipment are cleaned, maintained and stored 4.3. Faulty tools and equipment are tagged and reported to appropriate personnel 4.4. Work area is cleaned and waste is disposed of according to workplace practices 4.5. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- read and understand documentation
- ask questions to gain information
- complete standardised workplace documentation
- work with others and in a team to construct folding arm style awnings
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- test systems and make adjustments
- select appropriate solutions to problems
- adapt to new situations
- discuss initiatives with colleagues
- initiate solutions to problems
- plan and organise own work, including preparation and planning of work and obtaining equipment and materials to avoid backtracking
- manage own time and prioritise own work
- assess own skills and knowledge
- take responsibility
- apply quality practices
- adapt to new skill requirements
- apply reflective skills
- use workplace technology related to constructing pelmets, including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for constructing pelmets
- organisational and site standards, requirements, policies and procedures for constructing pelmets
- environmental protection requirements relating to the disposal of waste material
- established communication channels and workplace/worksites protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance
- computer programs
- cutting patterns and sequences
- cutting tool condition assessment
- terms used to describe components of pelmets

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement |
|---|

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks in constructing pelmets
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Identify materials and equipment used in constructing pelmets
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Communicate and work with others in the work area
- Report process for materials faults, damaged products or equipment
- Cut component materials according to work orders to within +/- 1 mm
- Construct a minimum of four pelmets suitable for four different style of internal blinds

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of required knowledge and skills may be conducted in workplace or simulated workplace environments
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to constructing pelmets
 - workplace practices including standard operating procedures and work instructions for constructing pelmets

Method of assessment

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of

EVIDENCE GUIDE

required knowledge and skills

Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> include Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> include applicable legislation from all levels of government that affect organisational operation. Requirements may include award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Workplace practices	<ul style="list-style-type: none"> may include legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines), tolerances, following manufacturer instructions and specifications
Personal protection needs	<ul style="list-style-type: none"> includes safety glasses/goggles, hearing protection, safety footwear, protective clothing and head wear, respiratory protection
Work order	<ul style="list-style-type: none"> includes quotations for work, job cards, customer orders specifications, including design, size, colour and quantity

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> includes saws, hammer, screwdriver, drill, pop rivet gun, glue gun
Materials	<ul style="list-style-type: none"> may include timber, metal, wood weave
Hardware	<ul style="list-style-type: none"> may include screws, nails, pop rivets
Work sequence	<ul style="list-style-type: none"> should cover the steps for construction of pelmets in a logical order to prevent backtracking
Work instructions	<ul style="list-style-type: none"> includes instructions for constructing pelmets
Appropriate personnel	<ul style="list-style-type: none"> may include trainer, assessor, supervisor, team leader, maintenance officer or manager or any person responsible for your activities in the workplace/worksite
Waste	<ul style="list-style-type: none"> includes timber, metal, hardware waste removal should be in accordance with industry and enterprise specific policies and procedures
Workplace documentation	<ul style="list-style-type: none"> includes time sheets, customer care cards, work orders, reports

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFBA3009A Provide advice to customers on blinds and awnings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to provide advice to customers regarding blinds and awnings
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to provide advice to customers. The unit applies in a workplace and on-site environment and may be conducted in small to large scale enterprises.</p> <p>Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop and maintain knowledge of products and services	1.1. A comprehensive knowledge and understanding of industry <i>products</i> and <i>services</i> is actively and regularly researched from <i>authoritative sources</i> 1.2. <i>Characteristics of products</i> and services are identified and understood using available product and service <i>documentation</i> . 1.3. <i>Sample</i> materials, products and <i>visual aids</i> are collected and organised for easy use
2. Prepare for work	2.1. A range of materials and products are selected to match <i>customer requirements</i> and suitability for purpose 2.2. An appointment is arranged with the customer and an appropriate schedule is agreed
3. Confirm customer requirements	3.1. Questioning and <i>active listening</i> techniques are used to clarify customer requirements 3.2. Customer requirements are identified professionally, courteously and with tact 3.3. <i>Assumptions</i> are documented in accordance with workplace practices 3.4. Customer requirements are <i>fed back</i> accurately in language that can be understood by the customer and workplace staff 3.5. Customer requirements are <i>documented</i> in accordance with workplace practices
4. Provide advice on blinds and awnings	4.1. Viable options for colour, material and style that are relevant to the customer's requirements are presented 4.2. Options for colour, materials and style are explained to, and discussed with the customer to facilitate customer understanding of available products and services 4.3. Material samples and visual aids are made available to the customer to facilitate customer understanding of available products and services 4.4. Benefits and approximate costs of each option are explained to the customer to facilitate informed decision making
5. Agree selection with customer	5.1. Customer selection including agreed delivery timeframe is determined 5.2. Customer <i>commitment</i> to agreed selection is gained in accordance with workplace practices

ELEMENT	PERFORMANCE CRITERIA
	5.3. Documentation is completed following workplace practices including specification sheets for products selected (colour, style, etc) and drawings 5.4. Customer is informed of <i>rights and obligations</i> regarding product or service
6. Finalise process	6.1. Sample products are returned to storage as required 6.2. <i>Documentation</i> is submitted to <i>appropriate personnel</i> in accordance with workplace practices 6.3. Contact is maintained with customer throughout the manufacturing and installation process

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- read and understand documentation
- speak clearly and directly
- apply effective listening techniques
- ask questions to gain information
- complete standardised workplace information
- share information
- meet the needs of customers
- provide information to customers
- write workplace documentation
- present information
- work as part of a team
- share information
- apply a range of strategies to solve problems
- monitor and evaluate solutions
- identify and define problems
- develop practical solutions to problems
- select appropriate solutions to problems
- apply analysis skills
- show independence and initiative
- adapt to new situations
- initiate solutions to problems
- discuss initiatives with colleagues
- generate a range of options
- assess risks and take appropriate action
- manage innovation and change
- determine opportunities to improve processes
- take initiative and make decisions
- collect and organise information
- plan tasks and identify task outcomes
- plan use of resources
- assess and prioritise tasks
- manage time and resources
- participate in continuous improvement processes
- allocate people and other resources to tasks
- collect and analyse information

REQUIRED SKILLS AND KNOWLEDGE

- establish clear goals and deliverables
- amend own work practices
- clarify objectives
- manage workplace information
- select and sequence information
- manage own time and prioritise own work
- assess own skills and knowledge
- use feedback to improve performance
- take responsibility
- apply knowledge and confidence in own ideas
- apply quality practices
- work safely
- adapt to new skill requirements
- be open to new ideas and techniques
- invest time and effort into learning new skills
- be open to learning and accommodate change
- apply reflective skills
- use equipment and tools
- use technology relevant to the job
- use basic IT skills
- use IT to organise information

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to blinds and awnings manufacturing and installation
- organisational and site standards, requirements, policies and procedures for providing advice to customers
- interpretation of plans and worksheets
- colour coordination and matching
- fabric and material types and their application
- suitable applications of the various styles of blinds and awnings
- organisation's products and services
- principles and techniques of public relations and product promotion
- strategies for planning and monitoring activities
- consultation methods, techniques and protocols
- terms used to describe components of blinds and awnings
- procedures for the recording, reporting and maintenance of workplace records and information
- mathematical techniques for estimation and measurement of materials

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Identify products and materials used in blinds and awnings manufacturing • Conducting meetings and presentations • Assessing and reporting on customer satisfaction • Analysing sales and product development data • Completing workplace documentation • Advise customer on at least three occasions involving material, style and colour selection
<p>Context of, and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge and skills may be conducted in workplace or simulated workplace environment • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to providing advice to customers • workplace practices including standard documentation and procedures relevant to providing advice to customers
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills</p> <p>Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Products	<ul style="list-style-type: none"> includes blinds and/or awnings
Services	<ul style="list-style-type: none"> includes preparation, manufacturing and installation
Authoritative sources	<ul style="list-style-type: none"> includes manufacturers, industry resource groups, industry advocacy groups
Characteristics of products	<ul style="list-style-type: none"> includes characteristics of fabrics, materials, fixings
Documentation	<ul style="list-style-type: none"> includes product information sheets, specifications
Sample	<ul style="list-style-type: none"> may include fabric off-cuts, photographs, drawings, sketches
Visual aids	<ul style="list-style-type: none"> include photographs, brochures, computer presentations
Customer requirements	<ul style="list-style-type: none"> may include sun protection, darkening effects, privacy, insulation, decoration, noise reduction, weather protection, presenting a professional image, advertising and branding, light dispersment
Active listening	<ul style="list-style-type: none"> includes maintaining eye contact, asking questions to clarify meaning,
Assumptions	<ul style="list-style-type: none"> includes site access, removal and disposal of existing blinds, awnings or fixtures
Feed back	<ul style="list-style-type: none"> includes verbal or written feed back
Documented	<ul style="list-style-type: none"> includes quotation for work, sketches, drawings
Commitment	<ul style="list-style-type: none"> includes signing work order or contract, collecting and receipting deposits
Rights and obligations	<ul style="list-style-type: none"> includes cooling off periods, providing access to property, availability at arranged time, payment terms and conditions
Documentation	<ul style="list-style-type: none"> includes work orders, customer care cards

RANGE STATEMENT**Appropriate personnel**

- includes trainers, assessors, managers, production personnel, office staff, supervisors

Unit Sector(s)**Unit sector**

Blinds and awnings

Competency field**Competency field****Co-requisite units****Co-requisite units**

LMFBA4001A Assess suitability of blinds or awnings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to assess the suitability of blinds and awnings in a range of environments taking into account building structure, natural environmental constraints, regulations and legislation.
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Application of the Unit

Application of the unit	This unit applies to the skills and knowledge required to assess the suitability of blinds and awnings for a range of environments. The unit applies in a workplace and on-site environment and may be conducted in small to large scale enterprises. Applications involve responsibility for, and limited organisation of, others.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop and maintain knowledge of products	1.1. Identify and describe the characteristics of blind and awnings <i>products and components</i> 1.2. Sample materials, products and visual aids are collected and organised for use in presentations 1.3. Identify and describe <i>building styles</i> 1.4. Identify and describe <i>building codes, regulations and legislation</i>
2. Assess suitability of customer requirements for situation	2.1. Questioning and active listening techniques are used to identify and clarify customer needs and requirements 2.2. Location for product is inspected observing <i>OHS requirements</i> 2.3. <i>Restrictions and limitations</i> of building and natural environment are assessed 2.4. Restrictions and limitations of blinds and awnings are assessed
3. Provide advice to customer following assessment	3.1. Characteristics of products are explained using sample materials, visual aids and product specifications 3.2. Building covenant and other regulations and legislative requirements are presented to customer 3.3. Range of styles and materials are presented to the customer for evaluation 3.4. Customer queries are answered and examples used to illustrate answers
4. Finalise process	4.1. Sample products are returned to storage 4.2. Reports are prepared for the purpose of estimating and costing 4.3. Relevant information is presented to customer

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- greet customer in an appropriate manner, use appropriate questioning techniques and provide feedback to customer to satisfy customer needs and requirements
- work with others and in a team to assess suitability of blinds and awnings for situations
- develop positive workplace relationships
- apply a range of strategies to solve problems
- monitor and evaluate solutions
- identify, diagnose and rectify faults
- resolve conflict through negotiation
- identify and select practical solutions to problems using analytical skills
- show independence and initiative in making decisions
- discuss initiatives with colleagues to generate a range of options
- assess and take appropriate action to minimise risks
- manage innovation and change
- determine opportunities to improve processes
- collect and organise information for the purpose of:
 - planning tasks
 - planning use of resources
 - assessing and prioritising tasks
 - managing time and resources
- participate in continuous improvement processes
- collect and analyse information
- amend own work practices
- clarify objectives
- manage workplace information
- manage own time
- use feedback to improve performance
- take responsibility and display confidence in own ideas
- apply quality practices
- adapt to new skill requirements
- research and apply new ideas and techniques
- apply reflective skills
- use technology relevant to job
- use IT to organise information

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for assessing suitability of blinds and awnings for situations
- organisational and site standards, requirements, policies and procedures for assessing suitability of blinds and awnings for situations
- reading and interpreting workplace documents including work orders, work instructions and operator instructions
- established lines of communication and protocols
- types of tools and equipment used for assessing suitability of blinds and awnings for situations and procedures for their safe use, operation and maintenance
- terms used to describe components of blinds and awnings
- characteristics of materials used in the construction and installation of blinds and awnings
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- mathematical techniques for estimation and measurement

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Locate, interpret and apply information relevant to assessing suitability of blinds and awnings to a range of situations • Apply safe handling practices and safe operating procedures for equipment, products and materials to: <ul style="list-style-type: none"> • minimise the risk of injury to self or others • prevent damage to goods, equipment and products • Communicate and work with others in the work area
<p>Context of, and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of required knowledge and skills may be conducted in a workplace or simulated workplace environment • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to assessing suitability of blinds and awnings for situations
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of required knowledge and skills</p> <p>Assessment methods should be by direct observation of tasks and include questioning on required knowledge and skills to ensure its correct interpretation and application</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Products and components	<ul style="list-style-type: none"> includes Holland-style blinds, Roman-style blinds, vertical-style blinds, timber, plastic and aluminium Venetian-style blinds, pleated-style blinds, wood weave-style blinds, canopy-style awnings, metal louvre-style awnings, aluminium roll up-style awnings, folding arm-style awnings, hardware and fixings
Building styles	<ul style="list-style-type: none"> includes heritage, period, single and multi-storey
Building codes	<ul style="list-style-type: none"> include codes related to wind loads, fire attenuation and set backs
Regulations	<ul style="list-style-type: none"> include council, heritage trusts
Legislation	<ul style="list-style-type: none"> include applicable legislation from all levels of government. Requirements may include Australian Standards, OHS, the environment, relevant industry codes of practice, duty of care and heritage.
OHS requirements	<ul style="list-style-type: none"> includes Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include the use of personal protective equipment, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Restrictions and limitations	<ul style="list-style-type: none"> building <ul style="list-style-type: none"> materials, height, architectural integrity, access natural environment <ul style="list-style-type: none"> overhang, space, height weather <ul style="list-style-type: none"> wind rating, rainfall, directional perspective (ie north, south, east, west facing)

Unit Sector(s)

Unit sector	Blinds and awnings
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFCP2001A Use coopering sector hand and power tools

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required for the use of coopering hand and power tools and includes the identification, selection, preparation, use and storage of hand and power tools.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance of fundamental coopering operations. This unit may apply to a factory or an on-site environment and involves application of skills and knowledge at both the production worker and trade skills level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hand and power tools	1.1. Applicable OHS, legislative and organisational requirements relevant to cooeping operations are verified and complied with 1.2. Types of hand and power tools and their functions are identified 1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.4. Sources of power supply are recognised
2. Select hand tools	2.1. Hand tools selected are consistent with needs of the job 2.2. Selected hand tools are checked for serviceability and safety and any faults rectified or reported 2.3. Equipment is selected to hold or support material for hand tools application where applicable
3. Use hand tools	3.1. Material is located and held in position for hand tool application 3.2. Hand tools are safely and effectively used according to their intended use 3.3. Hand tools are safely located when not in immediate use
4. Select power tools	4.1. Power tools are selected consistent with needs of the job in accordance with conventional work practice 4.2. Power tools are visually checked for serviceability/safety in accordance with OHS requirements and any faults rectified or reported 4.3. Equipment is selected to hold or support materials for power tool application as applicable
5. Use power tools	5.1. Material is located and held in position for power tool application as applicable 5.2. Power tools are safely and effectively used in application processes 5.3. Power tools are safely located when not in use
6. Clean work areas and maintain tools	6.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures 6.2. Waste and scrap is removed following workplace procedures 6.3. Tools used are cleaned, inspected for serviceable condition and stored appropriately in accordance with

ELEMENT	PERFORMANCE CRITERIA
	workplace procedures 6.4. Equipment and work area clean-up is maintained in accordance with workplace procedures 6.5. <i>Records and reports</i> are completed to workplace requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of coopering techniques
- seek learning opportunities
- use the workplace technology related to the selection, preparation and operator maintenance of coopering hand and power tools, including calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for coopering operation
- basic barrel construction terminology and techniques
- basic barrel repair terminology and techniques
- coopering tools, their characteristics, uses, limitations and operator maintenance requirements
- coopering hand tool application techniques
- coopering power tool set-up and application techniques

REQUIRED SKILLS AND KNOWLEDGE

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| <ul style="list-style-type: none">• cooperating components standard shapes and forms• environmental protection requirements relating to the disposal of waste material• established communication channels and protocols• problem identification and resolution• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Read and interpret a work/job specification • Select and use the hand tools specified in the range statement • Select and use the power tools specified in the range statement • Carry out operator maintenance on hand and power tools, including the grinding of: <ul style="list-style-type: none"> • shaves • specialised hand tools • drill bits • Store tools correctly • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for coopering operations • Communicate effectively and work safely with others in the work area
<p>Context of, and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • specifications and work instructions • the full range of routinely used coopering hand tools • the full range of routinely used coopering power tools
<p>Method of assessment</p>	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and</p>

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Tools and equipment

- hand tools for coopering are to include, but not be limited to hand plane, chisels, hand saws, spokeshave, hammer, mallet, auger, croze, driver, knives (belly, crum, heading, hollow), cooper's hammer, maul, bradawl,

RANGE STATEMENT	
	<p>adze(s), shaves (hoop, inside, heading), swift, marking-out tools, files, rasps, scraper, screwdrivers and hand drill</p> <ul style="list-style-type: none"> power tools for coopering are to include, but not be limited to bench grinder, presses (hoops), head making machine, drop saw, circular power saw, planer, double sided planer, drill, jig saw, CNC router, laser cutter, trimmer, biscuit machine, brad/nail and staple gun, and sanders (long belt, disk and machine)
Waste	<ul style="list-style-type: none"> may include but not be limited to off-cuts, shavings and sawdust
Records and reports	<ul style="list-style-type: none"> may include but not be limited to the machining method, product type, size, inspection, grading and labelling outcomes, storage locations, quality outcomes, hazards, incidents or equipment malfunctions

Unit Sector(s)

Unit sector	Coopering
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFCP2002A Produce barrels using non-fired processes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required for the production of barrels or other coopering products, and includes the preparation, machining, assembly and finishing of the products.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance of the fundamentals of coopering operations. This unit generally applies to a factory or plant environment and involves application of skills and knowledge at a production worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for production	1.1. Applicable OH&S , legislative and organisational requirements relevant to cooperating operations are verified and complied with 1.2. Work order is reviewed, confirmed and clarified with appropriate personnel 1.3. Barrel production sequence is planned 1.4. Procedures are determined for checking quality at each stage of the process 1.5. Suitable work area is selected for the task 1.6. Tools and equipment suitable for the work are selected and checked for safe operation
2. Select and prepare components	2.1. Materials , hardware, fittings and attachments are collected 2.2. Fixing and joining devices are selected in line with work instructions and type of materials to be joined 2.3. Jigs are selected and checked for suitability of purpose 2.4. Components , including staves and heads are machined and prepared to specification
3. Assemble components	3.1. Components are laid out and joined using jigs, appropriate fastenings and clamping devices 3.2. Hand and/or power tools, equipment are used as required 3.3. Assembled components are checked for compliance with specifications 3.4. Components are prepared, assembled, fitted and checked as per specification
4. Finish the product	4.1. Product is lined in accordance with specification 4.2. Product is tested for leakage and faults are repaired 4.3. Decorative features or fittings are fitted and secured to specification 4.4. Product is sanded and prepared for coating 4.5. Product is coated in accordance with specification and intended commercial application
5. Clean work area/s and maintain equipment	5.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures 5.2. Finished products are organised and stored in holding area 5.3. Waste and scrap is removed following workplace

ELEMENT	PERFORMANCE CRITERIA
	<p>procedures</p> <p>5.4. Tools and equipment used is cleaned; inspected for serviceable condition and stored appropriately in accordance with workplace procedures</p> <p>5.5. Equipment and work area clean-up is maintained in accordance with workplace procedures</p> <p>5.6. Records and reports are completed to workplace requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- use checking and inspection techniques to ensure barrels comply with specifications and that instances of non-compliance are remedied
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage during the production cycle
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and barrel production materials
- maintain current knowledge of barrel production techniques
- seek learning opportunities
- use the workplace technology related to the production of barrels including hand and power tools, calculators and measuring devices

Required knowledge

- State or Territory OH&S legislation, regulations, standards and codes of practice relevant to the full range of processes for coopering operation
- basic barrel construction terminology and techniques
- basic barrel repair terminology and techniques
- organisational and site standards, requirements, policies and procedures for coopering
- types of coopering tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of timber, timber products and defects

REQUIRED SKILLS AND KNOWLEDGE

- coopering components standard shapes and forms
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- set up and operation of machining equipment
- cutting patterns and sequences
- cutting tool condition assessment
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Read and interpret a work/job specification • Complete a minimum of two non-fired and fully finished barrel or equivalent products to specification • Effectively conduct operator maintenance on tools and equipment • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for coopering operations • Communicate effectively and work safely with others in the work area
<p>Context of, and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to producing a coopering product • specifications and work instructions
<p>Method of assessment</p>	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related</p>

EVIDENCE GUIDE

	<p>conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>OH&S requirements</p>	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
<p>Legislative requirements</p>	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OH&S, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
<p>Organisational requirements</p>	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OH&S, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
<p>Work order</p>	<ul style="list-style-type: none"> is used to determine job requirements including design, tolerances, process, materials, finish and quantity
<p>Appropriate personnel</p>	<ul style="list-style-type: none"> may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Barrel	<ul style="list-style-type: none"> at this level may refer to the traditional barrel or equivalent products such as vats, casks, tubs, bars or baths
Production sequence	<ul style="list-style-type: none"> includes docking and grading staves, dressing staves, jointing staves, rising or assembling barrel, bending the barrel, crozing, making heads, cutting the head, fitting the head, finishing the barrel, fitting final hoops and testing
Tools and equipment	<ul style="list-style-type: none"> hand tools for coopering are to include, but not be limited to hand plane, chisels, hand saws, spokeshave, hammer, mallet, auger, croze, driver, knives (belly, crum, heading, hollow), cooper's hammer, maul, adze(s), hollowing knives, shaves (hoop, inside, heading), swift, marking-out tools, files, rasps, scraper, screwdrivers and hand drill power tools for coopering are to include, but not be limited to bench grinder, drop saw, circular power saw, planer, drill, jig saw, router, trimmer, biscuit machine, brad/nail and staple gun, and sanders
Materials	<ul style="list-style-type: none"> may include solid timber, caulking cotton, wedges, workhole pegs, tooth picks and metal wedges
Jigs	<ul style="list-style-type: none"> may include but not be limited to shaped templates for routing
Coopering Components	<ul style="list-style-type: none"> are to include heads, staves and hoops and may include decorative features or fittings in steel, stainless steel or copper
Checking	<ul style="list-style-type: none"> is to cover: <ul style="list-style-type: none"> fit correct number and fitting of staves hoop and hardware, fittings and attachments, and conformity to work instruction and quality requirements
Lining	<ul style="list-style-type: none"> may include plastics, foil and sealing coating
Testing	<ul style="list-style-type: none"> is to include standard hot water leakage testing
Repair of leakage faults	<ul style="list-style-type: none"> may include plugging, caulking or re-machining

RANGE STATEMENT	
Decorative features or fittings	<ul style="list-style-type: none"> may include final hoops and taps which may be steel, stainless steel or copper
Coating	<ul style="list-style-type: none"> may include paint, lacquer, polyurethane and varnish
Storage	<ul style="list-style-type: none"> must ensure that there is no obstruction of traffic, components and products are not damaged in storage and products are accessible for further distribution/despatch
Waste	<ul style="list-style-type: none"> may include but not be limited to off-cuts, shavings and sawdust
Records and reports	<ul style="list-style-type: none"> may include but not be limited to the machining method, product type, size, inspection, grading and labelling outcomes, storage locations, quality outcomes, hazards, incidents or equipment malfunctions

Unit Sector(s)

Unit sector	Coopering
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFCP3001A Apply product and material knowledge to coopering operations

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to apply product and material knowledge to coopering operations by identifying and responding to timber properties, applying sensory evaluation techniques to wine products, identifying basic wine faults and responding to the impact of barrel properties on wine products.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in coopering operations. Apply product and material knowledge to coopering operations to a factory or on-site environment and involves the application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and respond to timber and material properties	1.1. Applicable OH&S , legislative and organisational requirements relevant to coopering operations are verified and complied with 1.2. The types of timber and inherent characteristics are analysed to select the optimum timber for the product 1.3. The characteristics and properties of oak are identified and considered 1.4. The properties and impacts of metals are identified and considered
2. Apply sensory evaluation techniques to wine products	2.1. Correct tasting procedures using sight, smell and taste are followed 2.2. The four key taste sensations of the tongue are identified 2.3. Characteristics of the key wine styles and grape varieties with regards to sight, smell and taste are explained 2.4. Wine is identified according to style and grape variety 2.5. The quality and characteristics of the wine style are evaluated ensuring conditions for evaluation are as favourable as possible
3. Identify basic wine faults	3.1. Basic wine faults are recognised and reported 3.2. The cork is inspected and faults identified
4. Respond to the impact of the barrel properties on wine product	4.1. The cause and effects on the product of controlled oxidation is considered and responded to 4.2. The cause and effects on the product of barrel maturation is considered and responded to 4.3. The cause and effect of the fermentation in barrel is considered and responded to 4.4. The impacts of toasting on the barrel and the product are responded to as a factor in the toasting operation 4.5. The impact of seasoning on the barrel timber components and the product are considered as a factor in determination of seasoning requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand detailed technical information related to the materials and the products used in and related to coopering operations
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain records related to product and materials quality
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- use sensory evaluation techniques to identify basic wine faults
- identify, anticipate and respond to the problems related to timber and material properties
- identify, anticipate and respond to the impact of the barrel properties on the product (wine and spirits)
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of coopering techniques
- seek learning opportunities
- use the workplace technology related to the selection, preparation and application of products and materials

Required knowledge

- State or Territory OH&S legislation, regulations, standards and codes of practice relevant to the full range of processes for coopering operation
- barrel construction terminology and techniques
- barrel repair terminology and techniques
- grape and wine types, characteristics, production methods and faults
- organisational and site standards, requirements, policies and procedures for

REQUIRED SKILLS AND KNOWLEDGE

coopering

- types of timbers used in the coopering industry, their characteristics, properties, uses and limitations
- types and sources of oak and the advantage/disadvantages of each
- the effects of the structure of timber including:
 - parts of the tree
 - tree cell structure
 - optimum stave production techniques
- types of seasoning and the impacts of techniques, including combination techniques, on the cell structure
- the effects of the barrel properties on the wine product
- the effects of the barrel properties on other products including spirits
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Read and interpret a work/job specification • Identify a range of timber types, including oak, and detail their uses and limitations • Identify and explain the properties of American and French oak • Identify and describe the characteristics of four main wine types through sensory evaluation (wine tasting) • Explain the likely effects of controlled oxidation, barrel maturation and in barrel fermentation on products • Identify the likely impact of various levels of toasting on products • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for coopering operations • Communicate effectively and work safely with others in the work area
<p>Context of, and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • examples of timber • samples of oak • a range of wine types • a range of toasting specifications
<p>Method of assessment</p>	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package Assessment methods must confirm consistency and</p>

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>OH&S requirements</p>	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
<p>Legislative requirements</p>	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OH&S, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
<p>Organisational requirements</p>	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OH&S, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
<p>Timber</p>	<ul style="list-style-type: none"> used in the broader cooping operations may include French/American/Australian oak, red gum, maple spruce, jarrah, birch, cyprus, elm and fir

RANGE STATEMENT	
Oak properties	<ul style="list-style-type: none"> are to include types and sources, composition, medullary rays, tyloses
Metals	<ul style="list-style-type: none"> used in coopering may include steel, stainless steel, copper and other alloys
Key wine taste sensations	<ul style="list-style-type: none"> include acidity, sweetness, weight or body and length
Key wine styles	<ul style="list-style-type: none"> include white, rose, red, fortified, sparkling, still, light-bodied, full-bodied, dessert, dry and medium
Grape varieties	<ul style="list-style-type: none"> include Shiraz, Cabernet Sauvignon, Merlot, Grenache, Pinot Noir, Chardonnay, Riesling and Semillon. Wines should be single varietals or a blend of two varieties
Wine characteristics	<ul style="list-style-type: none"> include clarity, colour type and intensity, alcohol (light, medium, high) intensity and character of aroma and flavour, sweetness, acidity, body, weight, mouth feel, tannin, balance and length
Wine faults	<ul style="list-style-type: none"> may include deposits, haze, tartrates, oxidation, cork taint, excessive sulphur
Controlled oxidation	<ul style="list-style-type: none"> may contribute to softening of tannins, increase colour and wine stability and production of various aroma compounds by oxidative processes
Barrel maturation	<ul style="list-style-type: none"> may contribute to extraction of flavours from the oak which enhance the complexity and intensity of the wine flavour
Fermentation in barrel	<ul style="list-style-type: none"> may influence flavour extraction
Toasting impact	<ul style="list-style-type: none"> includes the effects of increased agents such as guaiacol, vanilla and syringaldehyde and others on the taste and aroma of the wine
Seasoning impact	<ul style="list-style-type: none"> includes the effects on the levels of extractable oak constituents, particularly oak lactones

Unit Sector(s)

Unit sector	Coopering
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFCP3002A Select and season timber for coopering production

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to select and season timbers for use in coopering production by applying knowledge of production and timber technology to determine timber requirements, evaluate selected timber and season timber.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in coopering operations. Select and season timber for coopering production applies to a factory or plant environment and involves the application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine timber requirements	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to cooperating operations are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Structural requirements for <i>timbers</i> are determined from analysis of intended use and commercial requirements</p> <p>1.4. <i>Timber</i> is selected from pallet or storage and assessed for general suitability in accordance with selection criteria</p>
2. Evaluate the selected timber	<p>2.1. <i>Moisture content</i> of selected timber is determined to ensure compliance with production requirements</p> <p>2.2. <i>Density</i> and working properties of timber are determined to ensure compliance with production requirements</p> <p>2.3. Any <i>faults or features</i> in the timber are identified and strategies are identified to overcome/minimise their effects</p> <p>2.4. Timber selected for immediate use is transferred to appropriate holding area</p>
3. Season timber	<p>3.1. The outcomes of the timber evaluation are analysed to determine the seasoning requirement</p> <p>3.2. The optimal drying pattern, mixing <i>artificial</i> and natural drying techniques, is selected</p> <p>3.3. Artificial drying process is planned and details are confirmed before commencing</p> <p>3.4. Artificial drying equipment is operated to manufacturer's specifications and recommended process</p> <p>3.5. The artificial drying operation is carried out, with regular monitoring of moisture levels and targeted outcomes</p> <p>3.6. Timber is transferred to the natural drying site and <i>stored</i> to optimise drying potential</p> <p>3.7. Timber is monitored for moisture content and condition</p> <p>3.8. Site timber <i>records</i> are maintained and processed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand timber technology information related to coopering products
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to timber seasoning
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in timber and/or seasoning processes
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, estimate seasoning criteria and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of coopering techniques
- seek learning opportunities
- use workplace technology related to the selection and seasoning of timber, including calculators, measuring devices and drying systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for coopering operation
- barrel construction terminology and techniques
- barrel repair terminology and techniques
- organisational and site standards, requirements, policies and procedures for coopering
- types of timbers used in the coopering industry, their characteristics, uses and limitations

REQUIRED SKILLS AND KNOWLEDGE

- types and sources of oak and the advantage/disadvantages of each
- the effects of the structure of timber, including:
 - parts of the tree
 - tree cell structure
 - optimum stave production techniques
- types of seasoning and the impacts of techniques, including combination techniques, on the cell structure
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- set up and operation of artificial drying equipment/systems
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Read and interpret a work/job specification
- Select and evaluate a range of timber for coopering including the determination of moisture content and density
- Correctly identify the causes of a range of faults or features in timber
- Season timber using a combination of artificial and natural drying processes
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for coopering operations
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the selection and seasoning of timber
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and

EVIDENCE GUIDE

	<p>application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>
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Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Work order	<ul style="list-style-type: none"> is used to determine job requirements, including materials, tolerances and quantity
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Timber	<ul style="list-style-type: none"> used in the broader coopering operations may include French/American/Australian oak, red gum, maple spruce, jarrah, birch, cyprus, elm and fir oak, in cooperage usage, means timber from selected species of Quercus
Moisture content	<ul style="list-style-type: none"> is the moisture content of timber when it is at equilibrium with the moisture content of the air around it and is expressed as a proportion of the oven dry weight of the timber. At this point timber will gain or lose moisture as the humidity of the air around it changes, with commensurate shrinkage and expansion
Faults or features	<ul style="list-style-type: none"> include knots, sapwood, splits and shakes, rot and decay and insect attack (worm holes), shrinkage, mineral streak or brown stripe
Artificial drying methods	<ul style="list-style-type: none"> may include powered kilns, conveyor drier systems, vacuum dryers and a variety of dehumidifiers
Storage	<ul style="list-style-type: none"> must ensure that there is no obstruction of traffic, components and products are not damaged in storage and products are accessible for further distribution/despatch
Records and reports	<ul style="list-style-type: none"> may include but not be limited to the product type, size, inspection, grading and labelling outcomes, quality outcomes and storage locations

Unit Sector(s)

Unit sector	Coopering
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFCP3003A Produce barrels using fired processes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required for the production of fired processed barrels, and includes the preparation, machining, assembly, firing and finishing of the products.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance of advanced coopering operations. This unit generally applies to a factory or plant environment and involves application of skills and knowledge at a trade skills level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for production	1.1. Applicable OHS, legislative and organisational requirements relevant to coopering operations are verified and complied with 1.2. Work order is reviewed, confirmed and clarified with appropriate personnel 1.3. Barrel production sequence is planned 1.4. Procedures are determined for checking quality at each stage of the process 1.5. Suitable work area is selected for the task 1.6. Tools and equipment suitable for the work are selected and checked for safe operation
2. Select and prepare components	2.1. Materials , hardware, fittings and attachments are collected 2.2. Fixing and joining devices are selected in line with work instructions and type of materials to be joined 2.3. Jigs are selected and checked for suitability of purpose 2.4. Components , including staves and heads are machined and prepared to specification
3. Pre-assemble barrel components	3.1. Components are laid out inspected and selected for use and joined using jigs 3.2. Heads are joined and clamped 3.3. Staves are fitted and hooped 3.4. Hand and/or power tools, equipment are used as required 3.5. Assembled components are checked for compliance with specifications
4. Fire the barrel	4.1. Barrel's intended use and related technical instructions are analysed to determine the toasting technique and timing 4.2. Barrel interior is toasted to specification 4.3. Tensioning processes are applied 4.4. Hoops are fitted 4.5. Crozing is completed to specification 4.6. Heads are cut, bevelled to size and fitted
5. Finish the product	5.1. Barrel is finished using belt, disk or machine sander and hand tools 5.2. Final hoops and decorative features or fittings are

ELEMENT	PERFORMANCE CRITERIA
	<p>fitted and secured to specification</p> <p>5.3. Barrel is <i>tested</i> for leakage and faults are <i>repaired</i></p>
<p>6. Clean work area/s and maintain equipment</p>	<p>6.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures</p> <p>6.2. Finished products are organised and <i>stored</i> in holding area</p> <p>6.3. <i>Waste</i> and scrap is removed following workplace procedures</p> <p>6.4. Tools and equipment used is cleaned; inspected for serviceable condition and stored appropriately in accordance with workplace procedures</p> <p>6.5. Equipment and work area clean-up is maintained in accordance with workplace procedures</p> <p>6.6. <i>Records and reports</i> are completed to workplace requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to barrel production (fired process), work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use checking and inspection techniques to ensure barrels comply with specifications and that instances of non-compliance are remedied
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage during the production cycle
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and fired process barrel production materials
- maintain current knowledge of fired process barrel production coopering techniques
- seek learning opportunities
- use the workplace technology related to the production of barrels, including hand and power tools, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for coopering operation
- barrel construction terminology and techniques
- barrel firing/toasting techniques
- barrel repair terminology and techniques
- the impact of firing on barrel content characteristics
- organisational and site standards, requirements, policies and procedures for coopering

REQUIRED SKILLS AND KNOWLEDGE

- types of coopering tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of timber, timber products and defects
- coopering components standard shapes and forms
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- set up and operation of machining equipment
- cutting patterns and sequences
- cutting tool condition assessment
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information

appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Read and interpret a work/job specification
- Complete a fired and fully finished barrel or equivalent product to specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for coopering operations
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to producing a fired coopering product
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions (real or simulated) and require evidence of

EVIDENCE GUIDE

	<p>process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Work order	<ul style="list-style-type: none"> is used to determine job requirements, including design, tolerances, process, materials, finish and quantity
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Barrel	<ul style="list-style-type: none"> • may be referred to as barrels or casks
Production sequence	<ul style="list-style-type: none"> • includes docking and grading staves, dressing staves, jointing staves, using or assembling barrel, bending the barrel, firing, trussing and toasting, crozing, making heads, cutting the head, fitting the head, finishing the barrel, fitting final hoops and testing
Tools and equipment	<ul style="list-style-type: none"> • hand tools for coopering are to include, but not be limited to hand plane, chisels, hand saws, spokeshave, hammer, mallet, auger, croze, driver, knives (draw, belly, crum, heading, hollow), cooper's hammer, maul, bradawl, adze(s), hollowing knives, shaves (hoop, inside, heading), swift, marking-out tools, files, rasps, scraper, screwdrivers and hand drill • power tools for coopering are to include, but not be limited to bench grinder, presses (hoops), head making machine, drop saw, circular power saw, planer, double sided planer, drill, jig saw, CNC router, laser cutter, trimmer, brad/nail and staple gun, and sanders (long belt, disk and machine)
Materials	<ul style="list-style-type: none"> • are oak and may include oak and other suitable timbers, caulking cotton, wedges, workhole pegs and tooth picks
Jigs	<ul style="list-style-type: none"> • may include but not be limited to shaped templates for routing
Coopering Components	<ul style="list-style-type: none"> • are to include heads, staves and hoops and may include decorative features or fittings in steel, stainless steel or copper
Checking	<ul style="list-style-type: none"> • is to cover: <ul style="list-style-type: none"> • fit • correct number and fitting of staves • hoop and hardware, fittings and attachments, and • conformity to work instruction and quality requirements
Decorative features or fittings	<ul style="list-style-type: none"> • may include final hoops and taps which may be steel, stainless steel or copper
Testing	<ul style="list-style-type: none"> • is to include standard hot water leakage testing

RANGE STATEMENT	
Repair of leakage faults	<ul style="list-style-type: none"> may include plugging, caulking or re-machining
Storage	<ul style="list-style-type: none"> must ensure that there is no obstruction of traffic, components and products are not damaged in storage and products are accessible for further distribution/despatch
Waste	<ul style="list-style-type: none"> may include but not be limited to off-cuts, shavings and sawdust
Records and reports	<ul style="list-style-type: none"> may include but not be limited to the machining method, product type, size, inspection, grading and labelling outcomes, storage locations, quality outcomes, hazards, incidents or equipment malfunctions

Unit Sector(s)

Unit sector	Coopering
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFCP3004A Maintain and repair barrels

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required for the maintenance and repair of barrels, and includes the preparation, inspection, disassembly, cleaning, repair and restoration of barrels.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance of advanced coopering operations. This unit may apply to a factory or an on-site environment and involves application of skills and knowledge at a trade skills level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and confirm maintenance requirements	1.1. Applicable OHS, legislative and organisational requirements relevant to cooping operations are verified and complied with 1.2. Work order is reviewed, confirmed and clarified with appropriate personnel 1.3. Barrel is disassembled as necessary to provide inspection access 1.4. Barrel is cleaned of build-up materials or other matter which may inhibit inspection 1.5. Barrel is tested, inspected and evaluated for faults 1.6. Further maintenance and repair requirements are identified and/or confirmed
2. Prepare for maintenance and repair	2.1. Maintenance and repair requirements are analysed and procedures are determined for checking quality at each stage of the process 2.2. Tools, equipment, materials and components required for the maintenance and repair are selected, sourced and prepared for use 2.3. Disassembly required for maintenance and repair is completed 2.4. Barrel and components are cleaned internally and externally
3. Complete maintenance and repair activities	3.1. Faulty parts and components are replaced 3.2. Leakage faults are repaired by the appropriate means 3.3. Barrel is re-assembled and refired 3.4. Barrel is tested and inspected to confirm the effectiveness of repairs 3.5. Cleaning and sterilisation processes relevant to the work circumstances are selected and applied 3.6. Barrel is finished, fully restored and prepared for use
4. Clean work area/s and maintain equipment	4.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures 4.2. Waste and scrap is removed following workplace procedures 4.3. Tools and equipment used is cleaned; inspected for serviceable condition and stored appropriately in accordance with workplace procedures 4.4. Equipment and work area clean-up is maintained in

ELEMENT	PERFORMANCE CRITERIA
	accordance with workplace procedures 4.5. <i>Records and reports</i> are completed to workplace requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use
- identify and analyse faults in barrels
- select and apply the most appropriate barrel maintenance and repair techniques
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of coopering techniques
- seek learning opportunities
- use workplace technology related to the maintenance and repair of barrels, including hand and power tools, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for coopering operation
- barrel construction terminology and techniques
- barrel firing/toasting techniques
- barrel repair terminology and techniques
- the impact of firing on wine characteristics
- organisational and site standards, requirements, policies and procedures for

REQUIRED SKILLS AND KNOWLEDGE

coopering

- types of coopering tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of timber, timber products and defects
- coopering components standard shapes and forms
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- set up and operation of machining equipment
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information

appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Read and interpret a work/job specification • Clean a barrel using both hand and machine methods • Repair a leakage fault • Replace a range of faulty component parts • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for cooperating operations • Communicate effectively and work safely with others in the work area
<p>Context of, and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to the maintenance and repair of barrels • specifications and work instructions
<p>Method of assessment</p>	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of</p>

EVIDENCE GUIDE

	<p>process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Work order

- is used to determine job requirements including design, tolerances, process, materials, finish and quantity

Appropriate personnel

- may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Barrel	<ul style="list-style-type: none"> at this level may refer to the traditional barrel or equivalent products such as vats, casks, tubs, bars or baths
Barrel cleaning	<ul style="list-style-type: none"> is to include both hand and machine shaving of build-up and the application of authorised cleaning materials
Faults and blemishes	<ul style="list-style-type: none"> material faults include knots, sapwood, splits and shakes, rot and decay, insect infestation, mineral streak or brown stripe, broken chime, split staves, acetic or volatile barrel, mouldy barrel and water contamination manufacturing faults include head joint, stave and chime leakage wear, tear and deterioration faults include handling damage, discolouration, broken staves, buckled heads, burst heads, build up of fermentation products and contamination
Maintenance and repair requirements	<ul style="list-style-type: none"> are to include component repair and replacement, detailed cleaning and sterilisation, and testing
Tools and equipment	<ul style="list-style-type: none"> hand tools for coopering are to include, but not be limited to hand plane, chisels, hand saws, spokeshave, hammer, mallet, auger, croze, driver, knives (belly, crum, heading, hollow), cooper's hammer, maul, bradawl, adze(s), hollowing knives, shaves (hoop, inside, heading), swift, marking-out tools, files, rasps, scraper, screwdrivers and hand drill power tools for coopering are to include, but not be limited to bench grinder, presses (hoops), head making machine, drop saw, circular power saw, planer, double sided planer, drill, jig saw, CNC router, laser cutter, trimmer, biscuit machine, brad/nail and staple gun, and sanders (long belt, disk and machine)
Materials	<ul style="list-style-type: none"> are oak and may include caulking cotton, wedges, workhole pegs, tooth picks and metal wedges
Coopering Components	<ul style="list-style-type: none"> are to include heads, staves, hoops, flags or reeds, shives, wooden plugs, silicone plugs, mechanical seals, hoop nails and may include decorative features or fittings in steel, stainless steel or copper

RANGE STATEMENT	
Repair of leakage faults	<ul style="list-style-type: none"> may include plugging, caulking or re-machining
Testing	<ul style="list-style-type: none"> is to include standard hot water leakage testing
Waste	<ul style="list-style-type: none"> may include but not be limited to off-cuts, shavings and sawdust
Records and reports	<ul style="list-style-type: none"> may include but not be limited to the machining method, product type, size, inspection, grading and labelling outcomes, storage locations, quality outcomes, hazards, incidents or equipment malfunctions

Unit Sector(s)

Unit sector	Coopering
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFDN4001B Produce drawings from design concepts

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to produce manual and computer-aided drawings of objects from design concepts.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for the task	1.1. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.2. Purpose and operational characteristics of object to be drawn are identified 1.3. Production materials and method are identified
2. Establish design requirements and limitations	2.1. Type of drawing to be completed is identified 2.2. Design concept requirements are established and documented identifying dimensions, angles, shapes and finished size 2.3. Ergonomic requirements for the objects are identified, clarified and addressed throughout the work processes 2.4. Drawing conventions and specifications to be noted on the drawing are identified 2.5. Appropriate medium for drawings is identified and selected
3. Quantify and draft initial drawing	3.1. Dimensions are plotted from prototype sketch and documented specifications 3.2. Dimensional points are connected to match appropriate drawing view 3.3. Any production notes or special requirements are noted 3.4. Drawing conventions and specifications are noted on the documentation
4. Complete drawing	4.1. Angles, shapes and dimensions are checked against specifications and concept prototype drawing 4.2. Adjustments are made to the drawing within scope of authority 4.3. Drawing is checked for compliance with workplace documentation requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- research, collect, organise and understand information related to the design concept, including the relevant technical, regulatory, cultural, environmental and safety requirements
- communicate ideas and information to enable clarification of the conceptual requirements, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment, systems and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and dimensions, create accurate and scaled drawings, and estimate material requirements
- create and apply systematic problem solving techniques to anticipate drawing problems, avoid re-working and wastage
- use the workplace technology related to the drawing, including drafting tools and equipment, calculators and measuring devices and computing/computer-aided systems

Required knowledge

- manual and computer-aided drawing processes and techniques
- ergonomic principles for furniture design and manufacture
- presentation standards
- enterprise or equivalent operating procedures, including procedures for preparing drawings and presenting information
- relevant regulatory requirements, recognised standards and codes, and industry practices

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Locate, interpret and apply relevant information • Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment • Identify requirements of task and organise work to achieve goals and results • Interpret specifications and measurements in two and three-dimensional form • Satisfy ergonomic criteria during the drawing process • Present relevant information within the production drawing using both manual and computer-aided processes and techniques • Suggest improvements to drawing activities and where authorised, negotiate changes • Modify activities to cater for variations in workplace cultures and environment
<p>Resource implications</p>	<p>Design concept, specifications, dimensions and drawing equipment.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.</p>	
Unit scope	<ul style="list-style-type: none"> • The drawings to be produced are intended for use in a furnishing industry production or manufacturing environment • Drawings are to be produced using both manual and computer-aided processes • Drawings are to be both two and three-dimensional
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate conceptual ability, discretion, judgement and problem solving skills in the completion of drawings
Workplace environment	<ul style="list-style-type: none"> • The work may be conducted in any of the enterprises of the sectors that form part of the furnishing industry • Work is generally performed with little external assistance and with minimal supervision or direction • Drawing is to be undertaken in accordance with established industry and/or enterprise practices and procedures • Customers may be internal or external
Tools and equipment are to include:	<ul style="list-style-type: none"> • drafting table • drawing aids • computing equipment and work station and special lighting conditions
Materials are to include:	<ul style="list-style-type: none"> • drawing and computing consumables
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and</p>

RANGE STATEMENT	
	practices
Information and procedures	<ul style="list-style-type: none"> • Work procedures/instructions • Designer's concept and specifications/instructions • Legislation/regulations/codes relevant to the work undertaken • Furniture design principles and criteria, including ergonomic requirements • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Design
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Co-requisite units

Co-requisite units	
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Functional area

Functional area	
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LMFDN4002B Produce line and component production drawings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use computing and software capabilities to produce line and component production drawings.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Produce line drawings	<p>1.1. Drawing preparations, including essential information on product range, dimensions, customer requirements and enterprise information management systems are obtained/completed</p> <p>1.2. Presentation style and method and appropriate software capabilities are selected and applied</p> <p>1.3. Drawings accurately reflect the product specification</p> <p>1.4. Drawings cover the required product range</p> <p>1.5. Drawings are clear and comply with customer presentation requirements</p>
2. Prepare component production drawings	<p>2.1. Drawing preparations, including the essential information on component specifications, dimensions and drawing and labelling management are obtained/completed</p> <p>2.2. Drawing conventions and specifications to be noted on the drawing are identified</p> <p>2.3. Dimensions are plotted and connected to match appropriate drawing view/perspective</p> <p>2.4. Production notes, special requirements and drawing information is noted as required</p> <p>2.5. Drawing is checked for accuracy, clarity and compliance with enterprise documentation requirements</p> <p>2.6. Drawing is labelled and stored or processed in accordance with enterprise requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to the drawing requirement, including the relevant technical, regulatory, cultural, environmental and safety requirements
- communicate ideas and information to enable clarification of the conceptual requirements, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment, systems and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and dimensions, create accurate and scaled drawings, and estimate material requirements
- create and apply systematic problem solving techniques to anticipate drawing problems, avoid re-working and wastage
- use the workplace technology related to the drawing, including drafting tools and equipment, calculators and measuring devices and computing/computer-aided systems

Required knowledge

- computer-aided drawing processes and techniques
- drawing presentation standards
- ergonomic principles for furniture design and manufacture
- enterprise or equivalent operating procedures, including procedures for preparing drawings and presenting information
- relevant regulatory requirements, recognised standards and codes, and industry practices

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Locate, interpret and apply relevant information • Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment • Identify requirements of task and organise work to achieve goals and results • Interpret specifications and measurements in two and three-dimensional form • Satisfy ergonomic criteria during the drawing process • Present relevant information within the production drawing using computer-aided processes and techniques • Label and store drawing outcomes • Suggest improvements to drawing activities and where authorised, negotiate changes • Modify activities to cater for variations in workplace cultures and environment
<p>Resource implications</p>	<p>Line and production drawing requirements, specifications, dimensions and drawing equipment.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.</p>	
Unit scope	<ul style="list-style-type: none"> • The drawings to be produced are intended for use in a furnishing industry production, manufacturing or marketing environment • Drawings are to be produced using computer-aided processes and may be produced manually • Drawings are to be both two and three-dimensional
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate conceptual and analytical ability, judgement and problem solving skills in the completion of drawings
Workplace environment	<ul style="list-style-type: none"> • Work may be conducted in any of the enterprises of the sectors that form part of the furnishing industry • Work is generally performed with little external assistance and with minimal supervision or direction • Drawing is to be undertaken in accordance with established industry and/or enterprise practices and procedures • Customers may be internal or external
Tools and equipment are to include:	<ul style="list-style-type: none"> • drafting table • drawing aids • computing equipment and work station and special lighting conditions
Materials are to include:	<ul style="list-style-type: none"> • drawing and computing consumables
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and</p>

RANGE STATEMENT	
	practices
Information and procedures	<ul style="list-style-type: none"> • Customer and component specifications/instructions • Work procedures/instructions • Enterprise information management systems as they relate to drawing management • Legislation/regulations/codes relevant to the work undertaken • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Design
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Co-requisite units

Co-requisite units	
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Functional area

Functional area	
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LMFDN4003B Produce patterns and/or templates

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the development of patterns and/or templates for production processes.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for and dimension the task	1.1. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.2. Customer orders are interpreted to establish required sizes of finished products 1.3. Size requirements are checked in relation to the production process and finishing capacity of the workplace
2. Plan process	2.1. Material for pattern or template is identified for approximate size and characteristics 2.2. Required instruments and equipment are identified, located and assembled 2.3. Drawings and related specifications are interpreted 2.4. Procedures for using pattern development instruments and tools are checked and equipment is prepared for use
3. Plot dimensions	3.1. Equipment and tools are used following normal workplace procedures 3.2. Each dimension is measured, exploded and plotted maintaining appropriate angles, arcs and curves 3.3. Visual inspection and measurements are used to compare pattern dimensions and shapes with drawings and specifications
4. Complete pattern or template	4.1. Pattern or template is completed ensuring that the pattern indicates completion date and original drawing details 4.2. Required workplace approval of pattern or template is obtained 4.3. Plans are marked with notations for workplace requirements, including authorship, process or customer requirements, authorisation and any review dates 4.4. Plans are copied and filed as required according to workplace policies and procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- research, collect, organise and understand information related to pattern and template production, including the relevant technical, regulatory, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment, systems and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and dimensions, create accurate patterns and templates and estimate material requirements
- create and apply systematic problem solving techniques to anticipate pattern and template production problems, avoid re-working and avoid wastage
- use the workplace technology related to pattern and template production, including production tools and equipment, calculators and measuring devices and computing/computer-aided systems

Required knowledge

- company operating procedures, including procedures for pattern and/or template production
- types, characteristics uses and limitations of pattern/template materials
- operation requirements of equipment and work systems in own work area
- competency requirements of the work activities
- relevant regulatory requirements, recognised standards and codes, and industry practices

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Locate, interpret and apply relevant information • Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment • Interpret drawings and extrapolate to physical dimensions • Select appropriate mediums and materials • Produce a minimum of three patterns or templates making use of: <ul style="list-style-type: none"> • manufactured board • solid timber • composite material • Suggest improvements to pattern and template production and where authorised, negotiate changes • Modify activities to cater for variations in workplace cultures and environment
<p>Resource implications</p>	<p>Drawings, job specifications, tools and equipment, information on production/fabrication process, production materials and relevant computer equipment and software.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant equipment, simulated work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.</p>	
Unit scope	<ul style="list-style-type: none"> • This unit covers the work involved in producing patterns and/or templates of products from drawings • Patterns and/or templates are to be produced by hand, by using appropriate tools and equipment and by computer assisted production
Unit context	<ul style="list-style-type: none"> • OHS legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate conceptual ability, discretion, judgement and problem solving skills in the production of patterns or templates
Workplace environment	<ul style="list-style-type: none"> • Work may be conducted in any of the enterprises of the sectors which form part of the furnishing industry • Work is generally performed with little external assistance and with minimal supervision or direction • The development of patterns and/or templates is undertaken in accordance with established enterprise procedures and practices • Customers may be internal or external
Tools and equipment are to include:	<ul style="list-style-type: none"> • computer numeric controlled machines • static woodworking machines and relevant hand tools
Materials are to include:	<ul style="list-style-type: none"> • manufactured board • solid timbers and composite materials
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices</p>
Information and procedures	<ul style="list-style-type: none"> • Work organisation procedures and practices relating to the production of patterns and/or templates • Designer/drawer specifications and instructions

RANGE STATEMENT

	<ul style="list-style-type: none">• Legislation/regulations/codes relevant to the work undertaken• Furniture production techniques and criteria, including ergonomic requirements• Quality and Australian standards and procedures
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Unit Sector(s)

Unit sector	Furnishing Design
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Co-requisite units

Co-requisite units	
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Functional area

Functional area	
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LMFDN4004B Design, construct and test jigs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the competencies to design, construct and test jigs to accommodate production requirements within the furnishing industry.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify production requirements	<p>1.1. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.2. The item to be produced is identified from a work order</p> <p>1.3. Production requirements are identified from specifications, an existing item or from drawings, patterns and/or templates</p>
2. Design jig	<p>2.1. Design of proposed jig or fixture is produced</p> <p>2.2. Production process incorporating jig is planned</p> <p>2.3. Materials to be used to construct jig are selected</p>
3. Construct jig	<p>3.1. Appropriate tools and equipment are selected</p> <p>3.2. Jig is constructed as per design and within tolerances</p>
4. Test jig	<p>4.1. Jig is used to produce prototype to ascertain its adherence to set tolerances and to assess its match to original design</p> <p>4.2. Jig is adjusted as required to meet the requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to jig and fixture design, construction and testing, including the relevant technical, regulatory, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment, systems and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and dimensions, create accurate and scaled designs, and estimate material requirements
- create and apply systematic problem-solving techniques to anticipate jig and fixture design, construction and testing problems, avoid re-working and wastage
- use the workplace technology related to the jig and fixture design, construction and testing, including tools and equipment, calculators and measuring devices and computing/computer-aided systems

Required knowledge

- machine technical specifications, including the acceptable criteria for related jigs
- impact of design changes on jig construction
- characteristics, uses and limitations of materials used for jig/fixture construction
- jig and fixture design, construction and testing techniques

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Interpret work order and locate and apply relevant information • Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment • Follow work instructions, operating procedures and practices to: <ul style="list-style-type: none"> • prevent damage to materials, equipment or products • maintain the required production output and quality • identify and apply all OHS requirements • Produce a minimum of two jigs required to create complex fine furnishing items, including a moving jig • Produce a fixture in accordance with acceptable industry tolerances • Modify activities to cater for variations in workplace contexts and environment • Work effectively with others
<p>Resource implications</p>	<p>Access to item specifications, design support facilities, jig construction materials, machinery, equipment and hand tools appropriate to the jigs to be produced.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.</p>	
Unit scope	<ul style="list-style-type: none"> • This unit applies to the design, construction and testing of jigs required for manufacture, assembly, construction and testing of furnishing items • The employee requires only general supervision in the execution of duties and has discretion in selecting techniques, processes and procedures in the production process
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate conceptual ability, discretion, judgement and problem solving skills in the completion of this competency
Workplace environment	<ul style="list-style-type: none"> • Competency may be demonstrated in workplaces which are involved in or provide support for the manufacture and restoration of a wide range of furniture and furnishing items and components • Work is generally performed individually, but may be in a team environment • Customers or suppliers may be internal or external
Tools may include, but are not limited to:	<ul style="list-style-type: none"> • routers • spindle moulders • panel saws • copy shapers and radial arm saws
Materials are to include:	<ul style="list-style-type: none"> • solid timbers and manufactured board and may include composites
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and</p>

RANGE STATEMENT	
	practices
Information and procedures	<ul style="list-style-type: none"> • An enterprise work order which may be raised in response to a customer order, a modification to an item of production, or a new product line of the enterprise • Product drawings, prototype, design brief, patterns, specifications and/or specifications • Machine manufacturer specifications and operational procedures • Workplace instructions, including, job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communicating • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Design
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Co-requisite units

Co-requisite units	
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Functional area

Functional area	
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LMFDN4005B Work within a furniture design team

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to research, develop and present design and development proposals and document outcomes and proposals within a multi-disciplinary enterprise team environment.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Interpret design brief	1.1. Design parameters are clarified, in consultation with designer, sales team, management and/or client where required 1.2. A strategy plan and/or critical path plan is developed when required 1.3. Constraints are identified and taken into account when clarifying the brief
2. Research relevant information	2.1. Trends in materials are researched for performance, aesthetics, care/maintenance requirements and suitability to project or design 2.2. Trends and new technology are researched, where appropriate 2.3. Client priorities are clarified, including cost, performance, aesthetics and availability 2.4. Technical requirements associated with production are assessed, within specified guidelines 2.5. Any additional expertise required for the project is identified
3. Contribute to design concepts	3.1. Preliminary concepts are worked out in conjunction with others to identify possibilities 3.2. Design concept is developed through predetermined criteria such as ergonomics, materials, colour, properties and end application 3.3. Ideas are contributed and discussed with team members 3.4. Relevant support materials and explanations are developed and refined in conjunction with members of the design team
4. Contribute to the presentation of design/product	4.1. Roles of self and others for the presentation meeting are determined 4.2. Presentation of design or product is carried out in a manner which promotes the design's acceptance/approval
5. Maintain records	5.1. Records are maintained and reports prepared, where necessary, in accordance with enterprise procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- research, collect, organise and understand information related to the design, including the relevant technical, regulatory, cultural, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of work with other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the obtaining of systems and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and calculations required to support the design activity
- create and apply systematic problem solving techniques to anticipate problems, avoid re-working and wastage
- use the workplace technology related to design, including drafting tools and equipment, calculators and measuring devices and computing/computer-aided systems

Required knowledge

- company operating procedures, including procedures for developing design concepts
- design core and professional practices
- ergonomic principles for furniture design and manufacture
- operation requirements of equipment and work systems in own work area
- competency requirements of the work activities
- OHS requirements

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Identify requirements of task and organise work to achieve goals and results • Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment • Research information and share it with others in the team • Contribute to the design of products through discussion • Encourage excellence in performance of team/group members • Suggest improvements to design activities and, where authorised, negotiate changes • Modify activities to cater for variations in workplace cultures and environment • Work effectively with others
<p>Resource implications</p>	<p>Design development team, design concepts and access to R&D agencies/capabilities.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency, or the potential for consistency, of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of work, portfolio evidence and questioning on underpinning knowledge.</p> <p>Assessment may be conducted over time and in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.</p>	
Unit scope	<ul style="list-style-type: none"> • This unit covers the work involved in contributing to the activities of a design team in developing concepts and for designing products in furniture sector enterprises. • The competencies may involve: <ul style="list-style-type: none"> • applications associated with an original design • adaptation of designs • interpretation of sketches
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate conceptual and analytical ability, discretion, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • The competencies can refer to enterprise and client initiated ideas or requests • The competency is applied under general guidance on progress and outcomes • Size and work organisation within the enterprise will also determine the range of interaction with other areas/personnel, eg: <ul style="list-style-type: none"> • pattern maker • sample hand/machinist • marketing/sales • management • customer
Information and procedures	<ul style="list-style-type: none"> • Product catalogues, style manuals or equivalent • Enterprise business plans and products

RANGE STATEMENT

	<ul style="list-style-type: none"> • Work specifications • Customer requirements • Design brief • Organisation work procedures • Legislation, regulations and industry codes of practice relevant to the product • Quality and Australian standards and procedures
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Unit Sector(s)

Unit sector	Furnishing Design
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Co-requisite units

Co-requisite units	
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Functional area

Functional area	
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LMFDN5001B Generate and transfer complex computer-aided drawings and specifications

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the preparation of complex drawings using computer-aided techniques and capabilities, including three-dimensional modelling, exploded assembly drawings and conversion of drawings for CNC applications.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Create exploded assembly drawings	<p>1.1. Drawing preparations, including drawing name, labelling information, dimensions, specifications and information management requirements are obtained/completed</p> <p>1.2. Three-dimensional models are prepared for all components</p> <p>1.3. Perspective view of the model is created and confirmed</p> <p>1.4. Model is exploded so that all components are visible</p> <p>1.5. All individual components are labelled in accordance with enterprise requirements</p> <p>1.6. Quality checks are completed to ensure accuracy of outcomes</p> <p>1.7. Drawings are stored in accordance with enterprise requirements</p>
2. Create job sheets	<p>2.1. Preparations, including file storage, product coding, inventory information and drawing management requirements are identified and completed</p> <p>2.2. Job sheet template is set up in accordance with enterprise requirements and practices</p> <p>2.3. Necessary orthographic views are created and dimensioned</p> <p>2.4. Sequencing of machine operations and operator requirements are identified and listed</p> <p>2.5. Draft job sheets are prepared, reviewed, tested and amended to enterprise requirements</p> <p>2.6. Job sheets are stored in accordance with enterprise requirements</p>
3. Convert drawings for CNC applications	<p>3.1. Conversion requirements are identified and confirmed from the CNC machine specifications</p> <p>3.2. Layers and additional information required for final conversion are created</p> <p>3.3. Drawing entities are assigned to the relevant layers</p> <p>3.4. Conversion to the required file type is completed</p> <p>3.5. Converted file is stored in accordance with enterprise requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- research, collect, organise and understand information related to drawing and drafting, including the relevant technical, regulatory, cultural, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of work and the reporting of work outcomes and problems
- plan and organise activities to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and dimensions, create accurate and scaled drawings, and estimate material requirements
- create and apply systematic problem solving techniques to anticipate problems, avoid re-working and wastage
- use the workplace technology related to drawing and drafting, including calculators and measuring devices and computing/computer-aided systems

Required knowledge

- design core and professional practices
- ergonomic principles for furniture design and manufacture
- type, range, uses and limitations of contemporary computer-aided drafting software
- type, range, uses and limitations of contemporary cam applications
- the industry product range and detailed knowledge of furniture construction processes
- types of construction materials and their characteristics, uses and limitations
- materials, trims, accessories and their properties and characteristics
- enterprise information management systems and processes related to drawings
- relevant OHS legislation, regulatory requirements and codes of practice

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Critical aspects of evidence

- Locate, access and interpret all required information
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- Create a minimum of two exploded assembly drawings, including:
 - preparation of three-dimensional models
 - creation of perspective views
 - exploding the models to expose all components
 - labelling of all components
 - management and storage of drawings
- Create a minimum of two confirmed job sheets which have the necessary orthographic views, and all required management and inventory information
- Convert a minimum of two drawings for CNC application, including the creation of layers, assignment of drawing entities and the protection and storage of converted files
- Work effectively with others

Resource implications

Access to real or appropriately simulated situations involving the application of drawing and drafting techniques and to the related computing, operational and inventory support systems

This includes real or simulated concepts, work areas, materials, equipment and information on work specifications, customer requirements, organisation procedures, relevant safety procedures and regulations and quality standards

Method of assessment

Assessment methods must confirm consistency, or the potential for consistency, of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of work and questioning on underpinning knowledge.

Assessment may be conducted over time and in conjunction with assessment of other units of competency.

EVIDENCE GUIDE	
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant task requirements, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.</p>	
Unit scope	<ul style="list-style-type: none"> • Work involves the identification, selection and use of computer-aided techniques and capabilities, including three-dimensional modelling, exploded assembly drawings and conversion of drawings for CNC applications • Activities may include: <ul style="list-style-type: none"> • researching software trends and developments • generating and presenting ideas • liaising with client and/or other functional areas • compiling information
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with statutory requirements, organisation insurance requirements, OHS legislation, environmental legislation, manual handling procedures and relevant health regulations • Work requires individuals to demonstrate conceptual, analytical and organisational ability, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • The competency can refer to enterprise and client initiated ideas or requests • The competency is applied under broad guidance within routine and non-routine situations
Information and procedures	<ul style="list-style-type: none"> • Customer requirements • Work specifications • Product catalogues and style manuals or equivalent • Inventory systems and records • Organisation work procedures and sequencing arrangements • Legislation/regulations/national and industry codes and practices relevant to the product • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Design
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Co-requisite units

Co-requisite units	
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Functional area

Functional area	
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LMFDN5006B Manage furniture design

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to clarify and confirm design objectives and goals, and to resource and manage the design cycle of actions to the point where the outcomes are ready for acceptance for production purposes.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify design objectives and success factors	1.1. Information on design tasks is collected, analysed and maintained 1.2. Design workload is packaged into discrete, manageable design work units 1.3. Criteria for each design work unit are identified and key success factors and indicators are established
2. Plan the design activity	2.1. The scope of each design work unit is reviewed and personnel and material resource requirements identified 2.2. Design work units are programmed and scheduled in accordance with target achievement dates and resource constraints 2.3. The design work plan, including key success/performance indicators, is processed and approved/agreed in accordance with enterprise procedures
3. Implement the design work plan	3.1. Resources, including human, material and equipment/systems, are allocated to particular design work units and tasks 3.2. Designers are involved in finalising work preparations and processes, and in establishing key performance indicators 3.3. Coordination issues with supporting agencies and departments are resolved 3.4. Management responsibilities for removing inhibitors to achievements are satisfied 3.5. Progress reviews are carried out and support provided to the designers to maintain technical design standards and achievement targets 3.6. Design outcomes are prepared, finalised and certified as meeting the required specifications 3.7. Design outcomes are documented and processed for client acceptance
4. Monitor and respond to design performance	4.1. Performance targets are monitored to assess progress and to provide indicators as to target revision or other intervention response 4.2. Unsatisfactory performance is identified and prompt action is taken to rectify the situation 4.3. Mentoring/coaching is provided to support individuals/teams 4.4. Recommendations for variations to plans are negotiated

ELEMENT	PERFORMANCE CRITERIA
	and approved by the appropriate person/groups 4.5. Systems, procedures and records associated with documenting performance are managed in accordance with the enterprise requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- research, collect, organise and understand information related to design management, including the relevant legal, technical, regulatory, fiscal, cultural, environmental and safety requirements
- communicate ideas and information to enable clarification of the management requirements, coordination of work and the reporting of work outcomes and problems
- plan and organise activities to optimise the use of resources and avoid any back tracking, workflow interruptions or wastage
- work with others and foster the team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly determine resource and cost requirements
- create and apply systematic problem solving techniques to anticipate problems, avoid reworking and avoid wastage
- use the workplace technology related to management, including computing/ computer-aided information management systems

Required knowledge

- intellectual property law provisions
- design and production issues:
 - fundamentals of the elements and principles of design
 - the industry, trends and knowledge of product design
 - product construction techniques and processes
 - detailed knowledge of a range of materials
 - research sources
 - materials, fibres, trims, accessories and their properties and characteristics
- management issues:
 - contemporary management and leadership practices
 - enterprise resource management policies and procedures/practices
 - enterprise fiscal management policies and procedures/practices
 - quality assurance for design processes
 - negotiation techniques
- workplace procedures and reporting process
- relevant OHS legislation, regulatory requirements and codes of practice

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Locate, access and interpret relevant information • Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment • Manage design within an enterprise, including: <ul style="list-style-type: none"> • identify design objectives and goals • plan design activities • implement the design work plan • monitor and respond to design performance • Communicate effectively with design team and customers • Maintain accurate records
<p>Resource implications</p>	<p>Access to real or appropriately simulated situations involving the management of design activities</p> <p>This includes real or simulated work areas, materials, equipment, and information on work specifications, customer requirements and quality standards, organisation procedures and relevant safety procedures and regulations</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency, or the potential for consistency, of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of work, evidence portfolios and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant workloads, staff, equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation

<p>Unit scope</p>	<ul style="list-style-type: none"> • The management of design involves clarification and confirmation of design objectives and goals, the resourcing and management of design activities and the processing of outcomes for acceptance by the client • Activities may include: <ul style="list-style-type: none"> • liaising with client and/or other functional areas • identifying constraints to the design or proposal requirements • compiling information • preparing/confirming proposal and terms/ conditions • Management involves planning, implementation and quality assurance and requires the application of human, material, systems and financial resources
<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with statutory requirements, organisation insurance requirements, OHS legislation, environmental legislation, manual handling procedures and relevant health regulations • Work requires individuals to demonstrate leadership and organisational abilities, sensitivity, judgement and problem solving skills
<p>Workplace environment</p>	<ul style="list-style-type: none"> • The competency can refer to enterprise and client design ideas or requests • The competency is used independently within routine and non-routine situations
<p>Information and procedures</p>	<ul style="list-style-type: none"> • Design workload requirements and specifications • Enterprise, corporate and business plans • Enterprise and design organisation budget and resourcing policy • Summaries of materials, labour and overhead costs • Organisation work procedures • Legislation, regulations and industry codes of practice

RANGE STATEMENT	
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	relevant to the product
	<ul style="list-style-type: none">• Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Design
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Co-requisite units

Co-requisite units	
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Functional area

Functional area	
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LMFFDT4001A Apply finishing techniques to custom furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to apply finishing techniques to custom furniture.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to research, select and apply appropriate finishes for custom furniture. The competency applies to a work room and on site environment and involves application of skills and knowledge at a highly skilled craftsman or artisan level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires employability skills in initiative and enterprise and problem solving in order to select suitable finishes. Communication skills are used to access and interpret information. Technology is used to access information and apply finishes.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to finishing custom furniture are verified and complied with</p> <p>1.2. Instructions, plans and design briefs are read and interpreted to identify processes and materials to complete work tasks.</p> <p>1.3. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.4. Quality checking procedures are developed and documented for each step in the finishing process</p>
2. Select appropriate finish technology	<p>2.1. Design brief and furniture material, style and purpose are appraised to identify finishing technique options</p> <p>2.2. Using samples of the type of material surface and specified finish, various finishing options are evaluated and the preferred option is selected</p> <p>2.3. Specifications for type of finishing material to be applied are identified to determine means of application</p> <p>2.4. Method of applying finishes to surfaces is identified and evaluated</p> <p>2.5. Sample of material is tested with selected finishing technique to ensure appropriateness</p>
3. Finish furniture surface	<p>3.1. Furniture surface is prepared in accordance with the finishing specification</p> <p>3.2. Imperfections, pores, nail or screw holes on the surface are rectified</p> <p>3.3. Finishing processes and materials are applied in accordance with the agreed specifications</p> <p>3.4. Surface is polished or buffed depending on the shine required</p> <p>3.5. Work is checked against required quality standards</p> <p>3.6. Any non-conformity with the required quality standards is rectified</p>
4. Complete housekeeping	<p>4.1. Unused materials are stored or recycled as required</p> <p>4.2. Tools and equipment are cleaned and stored appropriately</p> <p>4.3. Faulty and defective equipment is tagged and reported in accordance with workplace practices</p> <p>4.4. Work area is cleaned and rubbish disposed of appropriately</p> <p>4.5. Workplace documentation and/or reports are completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and finishing procedures
- communicate ideas and information to enable confirmation of finishing requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate finishing problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- innovate and modify existing finishing techniques to suit the aesthetic and functional requirements of the product
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of installation techniques
- seek learning opportunities
- use the workplace technology related to finishing operations, including tools, equipment, calculators and measuring devices
- evaluate finishing materials to confirm compatibility and feasibility of material usage.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the application of finishes
- organisational and site standards, requirements, policies and procedures for the selection and use of finishing materials
- finishing techniques
- characteristics, properties and selection criteria of finishing materials
- finishing characteristics and properties of timber being used

REQUIRED SKILLS AND KNOWLEDGE

- matching requirements of adhesives and fasteners to timbers/materials used
- types of tools and equipment and procedures for their safe use, operation and maintenance
- work flow in relation to the furniture items being made or repaired
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for finishing the surface of timber furniture
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Finish a minimum of four different pieces of furniture using different finish technologies on each as specified in the Range Statement in accordance with industry standards
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - four realistic and differing finishing tasks
 - materials and equipment relevant to applying finishing techniques to custom furniture
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of

EVIDENCE GUIDE

	<p>performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <ul style="list-style-type: none">• Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency where finishing is involved
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling, including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Finishing custom furniture	<ul style="list-style-type: none"> refers to the preparation technique used on the furniture surface, the processes of selection, evaluation and application of any materials to the surface, the process of polishing and other final finishing processes
Instructions	<ul style="list-style-type: none"> workplace procedures relating to the use and operation of tools and equipment production planning figures workplace instructions, including job sheets, plans, specifications, drawings and designs workplace procedures relating to reporting and communications manufacturer instructions for the use of equipment and materials

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> may include power and hand sanders, brushes, steel wool, scrapers, rags, rubbing pads, brushes, spray guns, rottenstone, pumice and other polishing and rubbing compounds
Materials	<ul style="list-style-type: none"> may include timber (both indigenous and overseas), adhesives and fasteners, shellac, lacquer, polyurethane, oil finishes, stains, oxides, bleaching compounds, ammonia and filling compounds
Furniture surface preparation	<ul style="list-style-type: none"> may be by sanding by hand or power sander, scraping, planing or other smoothing technique is to take account of the fact that the colour of the wood may be changed by staining, bleaching, painting, ammonia fuming and/or a number of other techniques
Surface may be filled	<ul style="list-style-type: none"> using wood putty, wood plugs or other fillers
Finishing processes and materials	<ul style="list-style-type: none"> may include waxing, shellacking, nitrocellulose lacquering, conversion lacquering, linseed oiling, tung oiling, alkyd varnishing, polyurethane varnishing, water-based polyurethane and/or oil-varnish mixes, depending on the finish required, the furniture's use and the timber type used.

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4002A Assemble custom furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to assemble custom furniture to critical production specifications.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furniture maker operations.</p> <p>The competency applies to a work room and on-site environment and involves application of skills and knowledge at a highly skilled craftsman or artisan level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires employability skills in planning and organising and problem solving in order to correctly assemble custom components. Communication skills are used to access and interpret information and complete required documentation.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for work	<p>1.1. Applicable <i>legislative</i>, <i>OHS</i> and <i>organisational</i> requirements relevant to assembling <i>custom furniture</i> are verified and complied with</p> <p>1.2. <i>Instructions</i>, plans or design briefs and critical production specifications are read and interpreted to identify processes and materials to complete work tasks.</p> <p>1.3. Assembly sequence is planned and materials/component layout is confirmed</p> <p>1.4. <i>Tools</i>, <i>equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.5. Adhesives, trims and accessories are identified, evaluated against the production specification and selected for use</p> <p>1.6. Quality checking procedures are developed and documented for each step in the assembly process</p>
2. Assemble custom furniture	<p>2.1. Components, materials and tools are laid out in accordance with the assembly plan</p> <p>2.2. Components are checked against specification prior to assembly and out of specification items are rejected</p> <p>2.3. Components are assembled and checked against specification for accuracy, fit, twist and distortion</p> <p>2.4. Doors, drawers and shelves are assembled and fitted</p> <p>2.5. Hardware and decorative accessories are applied to specification</p> <p>2.6. Product quality is prepared for final finish including the removal of bruises, scratches, dents and marks</p> <p>2.7. Product quality is checked against plans at identified checkpoints</p>
3. Complete housekeeping	<p>3.1. Unused materials are stored or recycled as required</p> <p>3.2. Tools and equipment are cleaned and stored appropriately</p> <p>3.3. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices</p> <p>3.4. Work area is cleaned and rubbish disposed of appropriately</p> <p>3.5. Workplace documentation and/or reports are completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate custom furniture assembly problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of installation techniques
- seek learning opportunities
- use the limited workplace technology related to assembling custom furniture, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to assembly of custom furniture
- organisational and site standards, requirements, policies and procedures for the assembly of custom furniture
- techniques for the assembly, fixing and finishing of custom furniture components
- characteristics and properties of materials used in furniture components
- types, characteristics, uses, limitations and safety requirements of tools and equipment used in assembly operations
- types, characteristics, uses, limitations and safety requirements of adhesives and fasteners used in custom furniture assembly

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• work flow in relation to the furniture items being assembled• problem identification and resolution• environmental protection requirements. |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for assembling custom furniture
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Assemble and prepare for finishing a minimum of three different and significant custom furniture products
- Utilise at least three different adhesive types
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - realistic assembly requirement involving three significant products
 - materials and equipment relevant to assembling custom furniture
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge• Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other related units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Custom furniture	<ul style="list-style-type: none"> is defined as one-off manufacture in response to specific customer requirements. It does not include variations or modification to a production line item may include, but is not limited to wall units, vanity units, kitchen cabinets, side-boards/buffets, drawer units, display cabinets, counters, tables, beds
Instructions	<ul style="list-style-type: none"> workplace procedures relating to the use and operation of tools and equipment workplace instructions, including job sheets, plans, specifications, drawings and designs for custom furniture item workplace procedures relating to reporting and communications manufacturer instructions for the use of equipment and materials

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> may include but is not limited to clamps, winding sticks, measuring tapes or rules, hammers, mallets, squares and presses
Materials	<ul style="list-style-type: none"> may include timber (both indigenous and overseas), adhesives, screws, nails, dowels, metal fasteners, knockdown fittings, glass, decorative finishes and abrasive paper

Unit Sector(s)

Unit sector	Furniture design and technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4003A Assess and record the lifecycle of a product

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to assess and record the design and production of a product from its raw source to its completion and life as a product in accordance with design elements and principles.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. Recording of the product lifecycle applies to an industry workplace or design studio environment and involves application of skills and knowledge at a tradesperson equivalent level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess raw sources of material	1.1. Applicable OHS, legislative and organisational requirements relevant to recording the lifecycle of a product are verified and complied with 1.2. Design brief is reviewed, confirmed and clarified with appropriate personnel 1.3. Communication with others is established and maintained in accordance with OHS requirements 1.4. Most suitable materials to fulfil the brief are assessed to meet the requirements 1.5. Materials are assessed from their source taking account of where they derived from and their processing techniques 1.6. Materials are assessed for their ecological and environmental impact 1.7. Materials are assessed for their availability and supply 1.8. Information on raw materials is recorded for future use
2. Assess the design process	2.1. Problem or underlying factors being addressed by the design brief are verified and documented 2.2. User needs and desires are assessed and documented 2.3. Elements of design are assessed for the intended outcome and documented 2.4. Principles of design are assessed for the intended outcome and documented 2.5. Requirements of the brief are prioritised and assessed for conflicts 2.6. Activities to be undertaken to complete concepts, sketches, drawings and models are documented and prioritised 2.7. Final documentation outlining the full analysis of the design brief is compiled and produced as a report
3. Assess the production process	3.1. Production timeline is assessed 3.2. Supply of raw materials for production is analysed 3.3. Available personnel with suitable skills are assessed for proficiency to complete production 3.4. Manufacturing process is assessed for equipment and assembly methods 3.5. Component production is mapped

ELEMENT	PERFORMANCE CRITERIA
	<p>3.6. <i>Finishing</i> requirements are assessed</p> <p>3.7. Final completion of product is assessed and quality checking arrangements put in place</p> <p>3.8. Action plan for production is completed</p>
4. Assess the product life	<p>4.1. <i>Packaging and despatch</i> procedures are assessed and verified</p> <p>4.2. Destination of the final product is verified and documented</p> <p>4.3. Use of the product is assessed and potential life of the product estimated</p> <p>4.4. <i>Product lifecycle</i> process is reviewed using all of the assessed data</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- accurately recording and maintaining information relating to the furniture making and design functions
- maintain current knowledge of techniques and materials used in furniture production
- seek learning opportunities.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for assessing and recording furniture details
- organisational and site standards, requirements, policies and procedures for assessing and recording furniture details
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- ergonomics and aesthetic values
- characteristics of materials, products and defects
- computer programs

REQUIRED SKILLS AND KNOWLEDGE

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| <ul style="list-style-type: none">• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement. |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively record the lifecycle of a product from its raw source to its end use, work through the design process assessing the requirements and recording the intended outcomes • Effectively apply design elements and principles to a product lifecycle • Effectively produce a report on the intended outcomes of a product lifecycle analysis • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for recording the lifecycle of a product • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to recording the lifecycle of a product • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of

EVIDENCE GUIDE	
	<p>tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures • requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation • requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> • is to include the aims, objectives, milestones for the design project, the point of reference for everyone, elements and principles of design and may include organisational or personal profiles, aims, target audience,

RANGE STATEMENT	
	budget, timeline, consultation requirements, colour requirements, image requirements and function
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Material	<ul style="list-style-type: none"> may include but not be limited to native timber (native and imported), man-made timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Sources	<ul style="list-style-type: none"> may include but not be limited to the origin of the raw material including, the type and location wood was derived from, how and where it was processed, growth impact and available seasoning lead time, the mining source of metal or alloys and how these were processed, the formulas for the composition of plastics, the origin of textiles and how these were milled
Ecological and environmental impact	<ul style="list-style-type: none"> may include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will affect the area it has been sourced from, similarly what impact will be felt by reducing or stopping material from the source
Documentation	<ul style="list-style-type: none"> may include but not be limited to working notes, hand written records, typed information and reports
Elements of design	<ul style="list-style-type: none"> may include but not be limited to line, shape, form (geometric or organic), texture, colour and function
Principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, proportion (symmetry, asymmetry), harmony,

RANGE STATEMENT	
	contrast, pattern, movement, rhythm, unity, style, focus, scale, dominant, sub dominant or subordinate relationship, emphasis, proximity, alignment, space, anthropometry, ergonomics, arrangement, workload, materials handling capacity, skills, control, equipment capabilities, aesthetic relations, tension and development methods
Concepts	<ul style="list-style-type: none"> are to include ideas generated to respond to the design brief through both ideation drawings or sketching and written explanation
Sketches	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand
Working drawings	<ul style="list-style-type: none"> may include but not be limited to drafted technical drawings or drawings produced on computer using computer aided drafting software packages. These usually contain project specifications
Model	<ul style="list-style-type: none"> may include any three dimensional product which is made to full size or replicated through maquette. This is usually produced without normal manufacturing techniques, mainly to provide for the analysis of proportion, balance and aesthetic value
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Equipment	<ul style="list-style-type: none"> may include but not be limited to hand tools, static machinery, portable power tools and computer numerically controlled equipment is to include procedures for lock out protecting operators and co-workers from accidental injury by isolating the machine from the power source
Assembly methods	<ul style="list-style-type: none"> may include but not be limited to nailing, gluing, screwing, welding, pressing, sewing, bonding, jointing or connecting various materials

RANGE STATEMENT	
Components	<ul style="list-style-type: none"> may include but not be limited to the parts which make up the whole of a product. Each component is often requires some level of machining to result in the desire part
Finishing	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils and plastic coatings
Packaging and despatch	<ul style="list-style-type: none"> may include but not be limited to wrapping in fabric, plastic wrapping, shrink wrapping, boxing, foam shells and despatch by truck, trailer, train, plane or ship
Product lifecycle	<ul style="list-style-type: none"> is the evolution of a product from its raw source, through its inception, development, manufacture, completion and time as a completed product until potential renewal

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4004A Assess environmental impact of a design

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to assess the environmental impact of a design, recording its energy consumption, waste and material sustainability.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for assessing design sustainability at all stages of production, product use and disposal or recycling. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires employability skills in planning and organising and problem solving in order to assess environmental impact at all stages of production, use and disposal. Communication skills are used to interpret information and complete documentation. Initiative and enterprise is required to make judgement about environmental impact based on information.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess raw sources of material	1.1. Applicable OHS, legislative and organisational requirements relevant to assessing the environmental impact of a design are verified and complied with 1.2. Design brief is reviewed, confirmed and clarified with appropriate personnel 1.3. Communication with others to complete assessment is established and maintained 1.4. Materials are assessed from their source taking account of where they derived from, their processing techniques and energy used to obtain them 1.5. Materials are assessed for their ecological and environmental impact 1.6. Materials are assessed for their availability and sustainability
2. Assess the environmental impact of the design	2.1. User needs and desires are assessed and documented 2.2. Material choice and use as stated in the specifications is audited and assessed 2.3. Product lifecycle analysis is evaluated and longevity determined 2.4. Intended manufacturing processes including assembly and finishing are assessed for their impact on the environment 2.5. Final documentation outlining the full analysis of the designs impact on the environment is compiled and produced as a report
3. Assess the manufacturing process	3.1. Production timeline is assessed and energy use measured 3.2. Supply of raw materials for production is analysed and wastage estimated 3.3. Manufacturing process is assessed for equipment and assembly method energy usage and waste 3.4. Component production is analysed to measure energy use and waste 3.5. Finishing requirements are assessed for toxic waste levels and energy usage 3.6. Packaging, despatch and transport arrangements are analysed to measure energy usage 3.7. Final documentation outlining the full analysis of the manufacturing impact on the environment is compiled and produced as a report
4. Assess product	4.1. Ability for all components of product to be recycled are

ELEMENT	PERFORMANCE CRITERIA
potential for recycling	assessed 4.2. Non-recyclable components are identified and potential alternatives determined 4.3. Impact of non-recyclable components on environment is assessed 4.4. Recycling potential of the product is reported in documentation

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to environmental impact of materials, processes and products
- communicate ideas, information and research findings
- prepare evaluation documentation
- apply analysis techniques to determine environmental issues
- recognise and respond to circumstances outside instructions or personal competence
- plan activities covering the choice of evaluation method, the preparation and layout of the information
- plan assessment within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of materials and processes used in product production
- maintain current knowledge of environmental standards
- seek learning opportunities
- use the workplace technology related to electronic communication and documenting and presenting information.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to assessing the environmental impact of a design
- organisational and site standards, requirements, policies and procedures for assessing the environmental impact of a design
- elements and principles of design
- ergonomics and aesthetic values
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products, sources and defects
- energy consumption
- forest management and sustainability
- green house emissions
- resource utilisation
- waste and waste management
- computer programs
- product assembly techniques and equipment capabilities
- sketching and drawing
- procedures for the recording, reporting and maintenance of workplace records and

REQUIRED SKILLS AND KNOWLEDGE

information

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| <ul style="list-style-type: none">• appropriate mathematical procedures for estimation and measurement• environmental protection requirements• established communication channels and protocols• problem identification and resolution. |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively assess the environmental impact of a design from its raw source through manufacture to its end use and disposal and recording of the impact study outcomes
- Effectively measure the impact of design upon the environment
- Effectively produce a report on the impact study outcomes of a product
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for assessing the environmental impact of a design
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to assessing the environmental impact of a design
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions

EVIDENCE GUIDE	
	<p>(real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> is to include the aims, objectives, milestones for the design project, the point of reference for everyone, elements and principles of design and may include organisational or personal profiles, aims, target audience, budget, timeline, consultation requirements, colour requirements, image requirements and function
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of

RANGE STATEMENT	
	voice and body language
Material	<ul style="list-style-type: none"> may include but not be limited to native timber (native and imported), man-made timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Sources	<ul style="list-style-type: none"> may include but not be limited to the origin of the raw material including, the type and location wood was derived from, how and where it was processed, graph impact growth and available seasoning lead time, the mining source of metal or alloys and how these were processed, the formulas for the composition of plastics, the origin of textiles and how these were milled
Energy	<ul style="list-style-type: none"> is to include the measure of energy output in correlation to the cost to the environment in terms of electricity, gas or fossil fuel usage
Ecological and environmental impact	<ul style="list-style-type: none"> are to include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will affect the area it has been sourced from, energy consumption in achieving the material, green house gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source
Sustainability	<ul style="list-style-type: none"> is to include the amount of resource widely available based on demand and its capacity to renew or be renewed.
Documentation	<ul style="list-style-type: none"> may include but not be limited to working notes, hand written records, typed information and reports
Product lifecycle	<ul style="list-style-type: none"> is the evolution of a product from its raw source, through its inception, development, manufacture, completion and time as a completed product until potential renewal
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Assembly methods	<ul style="list-style-type: none"> may include but not be limited to nailing, gluing, screwing, welding, pressing, sewing, bonding, jointing or connecting various materials
Finishing	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils and plastic coatings
Wastage	<ul style="list-style-type: none"> may include wasting of valuable raw materials, wastage of energy to obtain the raw materials, wastage during the manufacturing process and how waste is or isn't managed

RANGE STATEMENT	
	after it is produced
Equipment	<ul style="list-style-type: none"> may include but not be limited to hand tools, static machinery, portable power tools and computer numerically controlled equipment is to include procedures for lock out protecting operators and co-workers from accidental injury by isolating the machine from the power source
Components	<ul style="list-style-type: none"> may include but not be limited to the parts which make up the whole of a product. Each component is often requires some level of machining to result in the desire part
Packaging and despatch	<ul style="list-style-type: none"> may include but not be limited to wrapping in fabric, plastic wrapping, shrink wrapping, boxing, foam shells and despatch by mobile means
Transport	<ul style="list-style-type: none"> may include movement by truck, trailer, train, plane or ship

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4005A Construct and evaluate furniture prototypes and samples

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to construct or oversee the construction of furniture prototypes and samples.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. Construction of prototypes and samples applies to an industry workplace or design studio environment. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires employability skills in initiative and enterprise, planning and organising and problem solving in order to construct prototypes and samples. Communication skills are used to access and interpret work requirements. Self management is applied to ensure project requirements are met and technology is used to construct samples.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for production	1.1. Applicable OHS, legislative and organisational requirements relevant to constructing prototypes and samples are verified and complied with 1.2. Design brief is reviewed, confirmed and clarified with appropriate personnel 1.3. Type and quantity of material to be used is acquired from the storage location 1.4. Equipment is selected appropriate to work requirements and checked for operational effectiveness in accordance with manufacturers recommendation 1.5. Communication with others is established and maintained in accordance with OHS requirements
2. Construct prototype or sample	2.1. Manufacturing process is planned and organised 2.2. Material is allocated in accordance with the manufacturing plan and safe working procedures 2.3. Components are selected 2.4. Assembly methods are researched and planned 2.5. Components are assembled in accordance with the sketches and freehand development drawings 2.6. Prototype or sample is finished according to draft specifications
3. Evaluate prototype or sample	3.1. Prototype or sample is evaluated for functionality and aesthetic appeal 3.2. Prototype or sample is assessed for their elements of design 3.3. Prototype or sample is assessed for their principles of design 3.4. Prototype is analysed against design brief requirements 3.5. Prototype is reviewed with client or test client 3.6. Modifications to the prototype or sample are explored to satisfy the requirements of the design brief 3.7. Prototype or sample production process faults are recorded and reported to the appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate custom furniture jointing problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of tools and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of jointing tools and materials
- maintain current knowledge of precision timber jointing techniques
- seek learning opportunities
- use the workplace technology related to the selection, preparation, operation and maintenance of hand and power tools including calculators and measuring devices
- apply knowledge of timber technology to optimise the selection and use of timber varieties.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for the construction of prototypes and samples
- organisational and site standards, requirements, policies and procedures for constructing prototypes and samples
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- ergonomics and aesthetic values

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- computer programs
- product assembly techniques
- sketching and drawing
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively construct a prototype or sample in accordance with the design brief and concept sketches and drawings
- Effectively apply design elements and principles to develop a prototype
- Effectively produce a prototype in accordance with a the design brief
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for constructing a prototype or sample
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to constructing a prototype or sample
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions

EVIDENCE GUIDE	
	<p>(real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> is to include the aims, objectives, milestones for the design project, the point of reference for everyone, elements and principles of design and may include organisational or personal profiles, aims, target audience, budget, timeline, consultation requirements, colour requirements, image requirements and function
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Material	<ul style="list-style-type: none"> may include but not be limited to scrap timber, man-made timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance

RANGE STATEMENT	
Storage locations	<ul style="list-style-type: none"> may include but not be limited to storage racks, storage bays, bins, stacks, pallet boxes, modularised storage components, temporary stacking bays (stand, frame or ground) and may be divided into standard product classification, product designation, size, dimension, stack number, weight, grade, shelf life or stock rotation position
Equipment	<ul style="list-style-type: none"> may include but not be limited to static machinery, portable power tools and computer numerically controlled equipment is to include procedures for lock out protecting operators and co-workers from accidental injury by isolating the machine from the power source
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Components	<ul style="list-style-type: none"> may include but not be limited to the parts which make up the whole of a product. Each component is often requires some level of machining to result in the desire part
Assembly process	<ul style="list-style-type: none"> may include but not be limited to nailing, gluing, screwing, welding, pressing, sewing, bonding, jointing or connecting various materials
Sketches	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand
Freehand development drawings	<ul style="list-style-type: none"> may include isometric, oblique, perspective, orthographic or elevation drawings which explode the parts of the concept sketches and include rough sizes, scale, tones and values
Prototype or sample	<ul style="list-style-type: none"> is usually a full size replica of the intended product outcome based on concept sketches and freehand development drawings, these are usually produced from stiff cardboard, scrap timber or possibly even moulding clay
Specifications	<ul style="list-style-type: none"> are to include the measurements, procedures by which a product is constructed and materials to be utilised
Functionality	<ul style="list-style-type: none"> is to include the purpose intended for the product in relationship to the design brief

RANGE STATEMENT	
Elements of design	<ul style="list-style-type: none"> may include but not be limited to line, shape, form (geometric or organic), texture, colour, and function
Principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, dominant, sub dominant or subordinate relationship, emphasis, proximity, alignment, space, anthropometry, ergonomics, arrangement, workload, materials handling capacity, skills, control, equipment capabilities, aesthetic relations, tension and development methods
Modifications	<ul style="list-style-type: none"> may include but not be limited to alterations to the original prototype concept to achieve better balance, proportion or aesthetic value
Records and reports	<ul style="list-style-type: none"> may include but not be limited to the design and production method, product type, size, inspection and labelling outcomes, storage locations, quality outcomes, hazards, incidents or equipment malfunctions

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4006A Establish and maintain a safe furniture making work environment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to conduct a systematic risk assessment of the work and work area and to establish and maintain a safe work environment throughout the conduct of furnishing technology operations.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furnishing technology operations. The competency applies to an on-site environment and involves application of skills and knowledge at a post-trade and small business proprietor level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires the application of employability skills associated with self management to assess and apply principles of OHS to operations. Communication skills are required to interpret and understand what is required to provide a safe workplace for self and others. Teamwork skills are required to understand the impact of own performance on the safety of others.</p> <p>This unit also requires the ability to use initiative and enterprise and problem solving strategies to identify and act upon hazards and risks within the workplace, and learning skills to participate in OHS related training.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and interpret operational and environmental information	1.1. Applicable legislative, OHS and organisational requirements relevant to the establishment and maintenance of a safe work environment are verified and complied with 1.2. Instructions and plans are read and interpreted to identify the process which will be undertaken to complete work tasks 1.3. Tools and equipment to be used are identified and their operating characteristics and safety requirements are analysed 1.4. The furnishing materials to be used are identified and their characteristics analysed
2. Identify hazards	2.1. Work area conditions are analysed to identify and recognise potential hazards 2.2. Relevant safety systems information is accessed and analysed to eliminate situations covered by existing and adequate procedures 2.3. The type and scope of unresolved hazards and their likely impact are recognised
3. Assess risk	3.1. Likelihood of the event happening is considered and determined 3.2. Consequence if the event should occur is evaluated and determined 3.3. Risk level (likelihood and consequence combined) is considered and determined
4. Identify and decide on risk treatment	4.1. Range of treatments which may eliminate or minimise the risk are identified 4.2. All possible options for resolution of the problem and dealing with the risk are identified and considered 4.3. Feasible options are subject to detailed analysis including the identification of resource requirements 4.4. Most appropriate treatment for dealing with the situation is selected
5. Implement the risk treatment	5.1. The course of action and treatment is planned and prepared in detail 5.2. Resources required for the treatment are acquired or obtained 5.3. Safety information and procedures are accessed and applied throughout the operations 5.4. The treatment is implemented 5.5. Information on the treatment and implementation is

ELEMENT	PERFORMANCE CRITERIA
	communicated to the relevant people

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of safety and risk management requirements and specifications, coordination of the required work with site supervisor, other workers and customers, and the reporting of safety outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise safety management
- use pre-checking and inspection techniques to anticipate possible hazards
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of treatment equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements for the management of workplace safety
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of workplace safety standards and instructions
- seek learning opportunities
- use the workplace technology related to the risk management including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to risk management in a furnishing technology work environment
- organisational and site standards, requirements, policies and procedures for furnishing technology
- types of tools and equipment, their operating characteristics and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- common furnishing technology related hazards and the range of commonly applied treatments
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

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| <ul style="list-style-type: none">• appropriate mathematical procedures for estimation and measurement• procedures for the recording, reporting and maintenance of workplace records and information. |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for risk management in a furnishing technology work environment
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
- To complete a minimum of one formal risk assessment of a significant work site including the determination and implementation of required treatments
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to establishing and maintaining a safe furnishing technology work environment
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace

EVIDENCE GUIDE	
	<p>relevant contexts) together with application of underpinning knowledge</p> <ul style="list-style-type: none"> • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation • requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures • requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling, including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> • workplace procedures relating to the use and operation of tools and equipment • workplace instructions, including job sheets, plans, drawings and designs • workplace procedures relating to reporting and communications • manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • hand tools are to include, but not be limited to, hand planes, chisels, hand saws, spokeshave, hammer, mallet, marking-out tools, files, rasps, scraper, screwdrivers and hand drill • power tools are to include, but not be limited to, drop saw, circular power saw, planer, drill, jig saw, router, trimmer,

RANGE STATEMENT	
	biscuit machine, brad/nail and staple gun and sanders
Materials	<ul style="list-style-type: none"> are to include but are not limited to adhesives, nails, and staples
Adhesives	<ul style="list-style-type: none"> may include solvent and water-based contact, construction adhesive, latex/resin/acrylic
Hazards	<ul style="list-style-type: none"> and risks may include dust inhalation, power sources and leads, flying debris, fume inhalation, trips, falls, lack of control during pouring, machine safety, vibration (direct and indirect consequences)
Treatments	<ul style="list-style-type: none"> may include the following: <ul style="list-style-type: none"> dust and fumes extraction systems isolation through testing, distance, barriers, entry limits, signage power source protection such as earth leakage, coded leads debris protections such as machine guards, skirts, distance, access controls pour protection through area sealing and plugs

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4007A Establish the design brief

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the skills and knowledge required to establish the objectives of a design brief and determine direction for the concepts and solutions which may result from the design process.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for establishing the objectives and key direction of a design brief where the brief has been, received from a client or is developed by the designer in response to a design challenge.</p> <p>This unit covers employability skills in teamwork, problem solving and communication skills to interpret design requirements. Initiative and enterprise and self management skills are required to ensure completeness of information and process information to determine brief requirements.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Collect information for the design brief	1.1. Applicable OHS, legislative and organisational requirements relevant to developing a design brief are verified and complied with 1.2. Client requirements and desires for final product are obtained reviewed, confirmed and clarified 1.3. Communication with others is established and maintained 1.4. Problems or underlying factors to be addressed by the design brief are verified 1.5. Requirements for the design brief are prioritised
2. Conduct research for the design	2.1. Areas for research are identified 2.2. Impacts of cultural, social and economic issues and influences and trends are identified and analysed 2.3. Ergonomic and anthropometric issues and influences are identified and analysed 2.4. Environmental issues are identified and analysed 2.5. Other relevant information is assessed and used to guide research 2.6. Design influences are prioritised for relevancy to design brief 2.7. Collected information is documented
3. Analyse and confirm design brief	3.1. Design requirements are translated in a manner which is clear and concise 3.2. Factors affecting the outcome of the project are documented 3.3. Criteria for assessing and evaluating design concepts are determined 3.4. Final design brief outlining all the requirements is compiled, produced and refined with the client

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential knowledge and skills and their level, required for this unit.

Required skills

- preparing and presenting research information
- collecting, organising and understanding information
- communicating ideas and information
- presenting ideas visually
- accurately recording and maintaining information relating to the design
- working and communicating with others to gain information
- recognising and responding to circumstances outside instructions or personal competence
- efficiently and safely contributing to innovative design process
- clarifying and confirming work instructions
- planning own work within the given task parameters
- maintaining current knowledge of tools and materials
- maintaining current knowledge of design techniques.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to developing a design brief
- organisational and site standards, requirements, policies and procedures for developing a design brief
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- ergonomic, anthropometric, social and cultural issues relating to design
- design processes
- research techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- historical design styles and movements
- current ethical issues in society affecting designs
- current market segments
- aesthetic aspect of elements and principles in 3-D design
- materials and finishes
- construction technologies
- techniques for the preparation and presentation of research information.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively establish requirements for the creative direction of a design brief
- Collect and analyse the implications of information relating to the design brief
- Effectively establish criteria for the intended solutions to meet the requirements of the design brief
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for developing a design brief
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to developing a design brief
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions

EVIDENCE GUIDE	
	<p>(real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Final product	<ul style="list-style-type: none"> may include but not be limited to items which are functional, applied, commercial or artistic, interior designs, furniture designs and interior decoration plans
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Design brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation,

RANGE STATEMENT	
	milestones for the design project, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline and consultation requirements
Areas for research	<ul style="list-style-type: none"> may include but not be limited to similar products and typologies, materials, social and cultural influences, site analysis, site conditions, functional requirements, target market characteristics and needs, relevant standards and regulations applying to product design
Environmental issues	<ul style="list-style-type: none"> may include but not be limited to use of renewable resources, energy efficiency, conservation of resources, recycling, waste/by-products/emissions and environmental consciousness/green design
Information	<ul style="list-style-type: none"> may include but not be limited to industry codes and symbols, Australian and international standards and regulations, historical literature on design styles and movement, ethical reference material, supplier's material data sheets, ergonomic, anthropometric statistical information, market research documents, photographic reference material, site plans and drawings
Documentation	<ul style="list-style-type: none"> may include but not be limited to working notes, hand written records, typed information and reports, diagrams, sketches, tables, matrixes, images and visual essays
Concepts	<ul style="list-style-type: none"> are to include ideas generated to respond to the design brief through both ideation drawings or sketching and written explanation
Sketches	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4008A Determine occupational health and safety implications of designs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to identify and assess the occupational health and safety (OHS) implications of furniture designs.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for the assessment of furniture designs, including accessories and materials, to determine potential hazards for a range of customer groups and those involved in the production of furniture designs.</p> <p>This unit requires the application of employability skills associated with self management to assess and apply principles of OHS to operations. Communication skills are required to interpret and understand what is required to provide a safe product for self and others. Teamwork skills are required to understand the impact of own performance on the safety of others.</p> <p>This unit also requires the ability to use initiative and enterprise and problem solving strategies to identify and act upon hazards and risks within the workplace, and learning skills to participate in OHS related training.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify principles of OHS	1.1. <i>Duty of care</i> and <i>responsibilities</i> of individuals and organisations are defined 1.2. Concepts of <i>hierarchy of control</i> are identified and related to the workplace 1.3. Codes of practice relating to specific workplace risks are identified 1.4. Importance of a <i>systematic approach</i> to OHS is understood 1.5. Applicable <i>legislative, OHS</i> and <i>organisational requirements</i> relevant to furniture designs are identified 1.6. The furnishing <i>materials</i> to be used and their key characteristics are identified
2. Assess OHS implications for furniture manufacturing	2.1. <i>Hazards associated with materials</i> used in the manufacture of furniture are identified 2.2. <i>Hazards associated with production</i> of furniture are identified 2.3. Safety measures implemented to control hazards to manufacturers are identified and implications for furniture designs evaluated 2.4. Information resources on safety aspects of materials and technology used in the production of furniture are identified and accessed
3. Assess OHS implications for customers	3.1. <i>Range of customers</i> for furniture products are identified and <i>potential hazards for users</i> determined 3.2. Potential hazards associated with components and accessories are identified 3.3. Safety measures implemented to control hazards to users are identified and implications for furniture designs evaluated 3.4. Information resources on safety aspects of furniture design are identified and accessed
4. Assess risk	4.1. Likelihood of hazards causing harm is considered and determined 4.2. Consequence if the event should occur is evaluated and determined 4.3. Risk level (likelihood and consequence combined) is considered and determined
5. Apply risk control measures to furniture design	5.1. Designs are evaluated for OHS implications 5.2. Range of treatments which may eliminate or minimise risks are identified 5.3. Feasible options are subject to detailed analysis including

ELEMENT	PERFORMANCE CRITERIA
	the identification of resource requirements 5.4. Most appropriate <i>treatment</i> for addressing risk is selected and applied to design

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of safety and risk management requirements and specifications, coordination of the required work with site supervisor, other workers and customers, and the reporting of safety outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise safety management
- use pre-checking and inspection techniques to anticipate possible hazards
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of treatment equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements for the management of workplace safety
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of workplace safety standards and instructions
- seek learning opportunities
- use the workplace technology related to the risk management, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to risk management in a furnishing technology work environment
- organisational and site standards, requirements, policies and procedures for furnishing technology
- types of tools and equipment, their operating characteristics and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- common furnishing technology related hazards and the range of commonly applied treatments
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

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| <ul style="list-style-type: none">• appropriate mathematical procedures for estimation and measurement• procedures for the recording, reporting and maintenance of workplace records and information. |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for risk management in a furniture design work environment
- Locate and apply safety information
- Assess safety aspects of furniture designs for a range of customers
- Address risks and hazards in furniture designs
- To complete a minimum of three risk assessments of furniture designs including the determination of required treatments
- Work effectively with others

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to establishing and maintaining a safe furnishing technology work environment
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Duty of care	<ul style="list-style-type: none"> • duty of care requires everything 'reasonably practicable' to be done to protect the health and safety of others at the workplace. This duty is placed on: <ul style="list-style-type: none"> • all employers • their employees • any others who have an influence on the hazards in a workplace
Responsibilities	<ul style="list-style-type: none"> • include complying, as far possible, with all activities carried out in accordance with the standard • reporting anything that might affect compliance with the standard
Hierarchy of control	<ul style="list-style-type: none"> • refers to the range of feasible options for managing the risk to health and safety. The hierarchy normally ranges over the following controls: <ul style="list-style-type: none"> • elimination of the hazard • its substitution with a less harmful version • its redesign • engineering controls • isolation of the hazard from people at the workplace • safe work practices • redesigning work systems • the use of personal protective equipment by people at the workplace
Systematic approach	<ul style="list-style-type: none"> • includes hazard identification, risk assessment, risk control and review
Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety

RANGE STATEMENT	
	<p>policies and procedures</p> <ul style="list-style-type: none"> requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Materials	<ul style="list-style-type: none"> include all materials associated with the furniture product including fabrics, finishes, wood, metal, plastic, paint, foam, oils, animal skin may also include but not be limited to adhesives, nails, and staples
Hazards associated with materials	<ul style="list-style-type: none"> may include but not be limited to chemical properties such as toxicity, fumes, combustibility, physical properties such as strength, weakness, splintering, breakage, weight, and components such as adhesives, nails, and staples
Hazards associated with production	<ul style="list-style-type: none"> may include but not be limited to manual handling, finishing and production processes, use of tools and machinery, dust inhalation, power sources and leads, flying debris, fume inhalation, trips, falls, lack of control during pouring, machine safety and vibration (direct and indirect consequences)
Range of customers	<ul style="list-style-type: none"> may include but not be limited to aged and the elderly, people with disabilities, children and adults
Potential hazards for users	<ul style="list-style-type: none"> may include but not be limited to allergies to materials, injury from materials or components, injury due to design faults, lack of stability, breakage and difficult to handle or install
Treatments	<ul style="list-style-type: none"> may include but not be limited to use of production safety strategies such as dust and fumes extraction systems, materials testing, power source protection, personal protective equipment, use of tested materials and accessories, and use of specialised safety features and components

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4009A Prepare and present furniture design information

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to prepare and present a range of design concepts as solutions to a design brief in accordance with integral design elements and principles.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. Preparation and presentation of a range of design information applies to an industry workplace or design studio environment and involves application of skills and knowledge at a supervisory equivalent level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires employability skills in initiative and enterprise, planning and organising and problem solving in order to determine information requirements. Communication skills are used to prepare and present information and self management skills are applied to ensure requirements are met. Technology is used to present information using various software tools.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for presentation of design information	<p>1.1. Applicable OHS, legislative and organisational requirements relevant to producing design development sketches and drawings are verified and complied with</p> <p>1.2. Design brief is reviewed, confirmed and clarified with appropriate personnel</p> <p>1.3. Type and quantity of concepts to be presented are assessed from the design brief</p> <p>1.4. Presentation equipment is selected appropriate to work requirements and checked for operational effectiveness in accordance with manufacturers recommendation</p> <p>1.5. Communication with others is established and maintained in accordance with OHS requirements</p>
2. Present design information	<p>2.1. Concept sketches are presented as solutions to the design brief and for the audience</p> <p>2.2. Sketches are represented as ideation drawings and presented using presentation boards and portfolios</p> <p>2.3. Freehand development drawings are incorporated into the presentation to represent the construction and joints</p> <p>2.4. Working drawings are presented to represent final measurements and specifications</p> <p>2.5. Concepts and their elements of design are promoted, explained and evaluated for the audience</p> <p>2.6. Concepts and their principles of design are promoted, explained and evaluated for the audience</p> <p>2.7. Presentation of design information is made using multimedia and computer based strategies</p>
3. Present manufacturing information	<p>3.1. Maquettes of concepts are presented for discussion and viewing</p> <p>3.2. Prototypes or samples are presented for viewing and aesthetic value</p> <p>3.3. Sample joints or joining techniques are presented to support the design theory</p> <p>3.4. Alternative manufacturing techniques are presented and promoted</p> <p>3.5. Material options are presented and promoted</p> <p>3.6. Assembly and finishing techniques and processes are presented and promoted</p> <p>3.7. Concept manufacturing process is evaluated and presented using multimedia and computer based strategies</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- draw designs
- make presentations
- source information
- collect, organise and understand information related to design requirements
- maintain accurate records
- communicate ideas and information
- sequence operations
- carry out work according to OHS practices
- use presentation tools.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to preparing and presenting design information
- organisational and site standards, requirements, policies and procedures for preparing and presenting design information
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- ergonomics and aesthetic values
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- computer programs
- presentation techniques and equipment
- product assembly techniques
- sketching and drawing
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively prepare and present design information to a prospective client interested in buying a design for manufacturing purposes
- Effectively apply design elements and principles to the presentation of design information
- Effectively prepare and present design information in accordance with the concepts and design brief
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for preparing and presenting design information
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to preparing and presenting design information
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions

EVIDENCE GUIDE	
	<p>(real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> is to include the aims, objectives, milestones for the design project, the point of reference for everyone, elements and principles of design and may include organisational or personal profiles, aims, target audience, budget, timeline, consultation requirements, colour requirements, image requirements and function
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Concepts	<ul style="list-style-type: none"> are to include ideas generated to respond to the design brief through both ideation drawings or sketching and written explanation
Presentation equipment	<ul style="list-style-type: none"> may include but not be limited to presentation boards, portfolios, photography, overhead projectors, data projectors,

RANGE STATEMENT	
	video and other forms of multi media
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Sketches	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand
Audience	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Ideation drawings	<ul style="list-style-type: none"> are to include freehand drawings which represent a product as a story and methodology to the design brief solution. These are often drawn as thumbnail sketches.
Freehand development drawings	<ul style="list-style-type: none"> may include isometric, oblique, perspective, orthographic or elevation drawings which explode the parts of the concept sketches and include rough sizes, scale, tones and values
Working drawings	<ul style="list-style-type: none"> may include but not be limited to drafted technical drawings or drawings produced on computer using computer aided drafting (CAD) software packages. These usually contain project specifications.
Specifications	<ul style="list-style-type: none"> are to include the measurements, procedures by which a product is constructed and materials to be utilised
Elements of design	<ul style="list-style-type: none"> may include but not be limited to line, shape, form (geometric or organic), texture, colour and function
Principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, dominant, sub dominant or subordinate relationship, emphasis, proximity, alignment, space, anthropometry, ergonomics, arrangement, workload, materials handling capacity, skills, control, equipment capabilities, aesthetic relations, tension and development methods
Multimedia	<ul style="list-style-type: none"> see presentation equipment
Computer based strategies	<ul style="list-style-type: none"> may include but not be limited to power point presentations, CAD demonstrations, written presentations and other scenarios utilising different software applications
Maquette	<ul style="list-style-type: none"> is to include a miniature version of the intended final product to establish if the elements and principles of design have been achieved. These are usually produced from cardboard or scrap timber

RANGE STATEMENT	
Prototype or sample	<ul style="list-style-type: none"> is usually a full size replica of the intended product outcome based on concept sketches and freehand development drawings, these are usually produced from stiff cardboard, scrap timber or possibly even moulding clay
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Material	<ul style="list-style-type: none"> may include but not be limited to native timber (native and imported), man-made timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Assembly process	<ul style="list-style-type: none"> may include but not be limited to nailing, gluing, screwing, welding, pressing, sewing, bonding, jointing or connecting various materials
Finishing	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils and plastic coatings

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4010A Produce and evaluate developmental furniture models to scale

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to produce developmental models to scale using fundamental design elements and principles for presentation purposes.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The production of developmental models to scale applies to an industry workplace or design studio environment. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires employability skills in initiative and enterprise, planning and organising and problem solving in order to produce and evaluate models. Communication skills are used to access and interpret work requirements. Self management is applied to ensure project requirements are met and technology is used to produce models.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency	Performance criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for production	1.1. Applicable OHS, legislative and organisational requirements relevant to producing developmental models to scale are verified and complied with 1.2. Design brief is reviewed, confirmed and clarified with appropriate personnel 1.3. Type and quantity of material to be used is acquired from the storage location 1.4. Equipment is selected appropriate to work requirements and checked for operational effectiveness in accordance with manufacturers recommendation 1.5. Communication with others is established and maintained in accordance with OHS requirements
2. Interpret design development sketches and drawings	2.1. Sketches and drawings are assessed for their elements of design 2.2. Sketches and drawings are assessed for their principles of design 2.3. Sample maquette is produced in accordance with the concept sketches and drawings 2.4. Concept is modified for its aesthetic value in keeping with the intended function 2.5. Working drawings are assessed for their specification requirements 2.6. Concept is planned for model manufacture taking into account available equipment and resources
3. Produce scale model	3.1. Manufacturing process is planned and organised 3.2. Material is processed in accordance with the manufacturing plan and safe working procedures 3.3. Components are produced and prepared for assembly 3.4. Components are assembled in accordance with the working drawings 3.5. Scale model is finished according to specifications
4. Evaluate scale model	4.1. Design and production process faults are recorded and reported to the appropriate personnel 4.2. Scale model is evaluated for functionality and aesthetic appeal 4.3. Scale model is evaluated against design brief requirements 4.4. Scale model is reviewed with client or test client 4.5. Modifications to the scale model are explored to satisfy the requirements of the design brief

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate custom furniture assembly problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of installation techniques
- seek learning opportunities
- use the limited workplace technology related to producing models, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for producing developmental models to scale
- organisational and site standards, requirements, policies and procedures for producing developmental models to scale
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- ergonomics and aesthetic values
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- characteristics of materials, products and defects
- set up and operation of equipment
- computer programs
- product assembly techniques
- sketching and drawing
- scale drawings and scale to human figure
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively produce developmental models to scale work through sketch development and the design process to produce a final scale model
- Effectively apply design elements and principles to design a scale model
- Effectively produce a scale model in accordance with the scale development sketches and drawings
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for producing developmental models to scale
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to producing developmental models to scale
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions

EVIDENCE GUIDE	
	<p>(real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones for the design project, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline and consultation requirements
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Material	<ul style="list-style-type: none"> may include but not be limited to native timber (native and imported), man-made timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Storage locations	<ul style="list-style-type: none"> may include but not be limited to storage racks, storage bays, bins, stacks, pallet boxes, modularised storage components,

RANGE STATEMENT	
	temporary stacking bays (stand, frame or ground) and may be divided into standard product classification, product designation, size, dimension, stack number, weight, grade, shelf life or stock rotation position
Equipment	<ul style="list-style-type: none"> • may include but not be limited to static machinery, portable power tools and computer numerically controlled equipment • may also include procedures for lock out protecting operators and co-workers from accidental injury by isolating the machine from the power source
Communication	<ul style="list-style-type: none"> • may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Sketches	<ul style="list-style-type: none"> • may include but not be limited to hand drawn images or ideation drawings completed freehand
Elements of design	<ul style="list-style-type: none"> • may include but not be limited to line, shape, form (geometric or organic), texture, colour, and function
Principles of design	<ul style="list-style-type: none"> • may include but not be limited to balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, dominant, sub dominant or subordinate relationship, emphasis, proximity, alignment, space, anthropometry, ergonomics, arrangement, workload, materials handling capacity, skills, control, equipment capabilities, aesthetic relations, tension and development methods
Maquette	<ul style="list-style-type: none"> • is to include a miniature version of the intended final product to establish if the elements and principles of design have been achieved. These are usually produced from cardboard or scrap timber
Concepts	<ul style="list-style-type: none"> • are to include ideas generated to respond to the design brief through both ideation drawings or sketching and written explanation
Aesthetics	<ul style="list-style-type: none"> • are to include the consideration of appeal to a large number of people; products are pleasing to the eye of many who view it
Working drawings	<ul style="list-style-type: none"> • may include but not be limited to drafted technical drawings or drawings produced on computer using computer aided drafting software packages. These usually contain project specifications
Manufacturing process	<ul style="list-style-type: none"> • may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing

RANGE STATEMENT	
	components utilising machine operations, assembly of the components and finishing techniques
Components	<ul style="list-style-type: none"> may include but not be limited to the parts which make up the whole of a product. Each component is often requires some level of machining to result in the desire part
Scale model	<ul style="list-style-type: none"> is to include a model replica of the intended final outcome product produced to a suitable scale to distinguish its features, for example 1:5 or 1:10. The model may be made from similar material as the intended final solution or in some cases made from modelling clay
Specifications	<ul style="list-style-type: none"> are to include the measurements, procedures by which a product is constructed and materials to be utilised
Functionality	<ul style="list-style-type: none"> is to include the purpose intended for the product in relationship to the design brief
Records and reports	<ul style="list-style-type: none"> may include but not be limited to the design and production method, product type, size, inspection and labelling outcomes, storage locations, quality outcomes, hazards, incidents or equipment malfunctions

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4011A Set up, operate and maintain basic static woodworking machines for furniture designs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up, operate and maintain basic static woodworking machines to achieve furniture design requirements.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in the set up, tuning, operation, maintenance and general problem solving of basic static woodworking machines, including a table saw, thicknesser, jointer and band saw.</p> <p>The competency applies to a work room and on-site environment and involves application of skills and knowledge at the highly skilled craftsman or artisan level.</p> <p>This unit requires employability skills in planning and organising, technology use and problem solving in order to correctly set up machines to perform specific woodwork operations. Communication skills are used to access and interpret work requirements and self management is applied to ensure ongoing performance of machines is maintained.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Determine set up and operating requirements of woodworking machines</p>	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the selection and use of static woodworking machines are verified and complied with</p> <p>1.2. Set up requirements for static woodworking machines are identified according to furniture design and safety requirements</p> <p>1.3. Operating requirements to achieve design outcomes are identified and safety requirements determined</p>
<p>2. Set up and operate static woodworking machines</p>	<p>2.1. Selected machines are checked for serviceability, precision settings, maintenance compliance and safety</p> <p>2.2. Work specifications and instructions are interpreted and machines are set up to perform operations</p> <p>2.3. Machines are operated according to manufacturer's operating procedures to achieve required work outcome</p> <p>2.4. Work is monitored to ensure quality standards are met</p> <p>2.5. Safety procedures are followed</p>
<p>3. Maintain static woodworking machines</p>	<p>3.1. Machines are assessed for performance compliance</p> <p>3.2. Faults or non compliances are identified and rectified, replaced or reported according to workplace procedures</p> <p>3.3. Problem solving techniques are applied to identify and address operational problems</p> <p>3.4. Routine maintenance is conducted to ensure optimal performance of machines</p> <p>3.5. Work area is maintained to housekeeping standards</p> <p>3.6. All machines are cleaned, maintained and stored in accordance with manufacturer specification</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- interpret and apply technical and quality information in the identification, selection and maintenance of static woodworking machines
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques which relate to the use of machines to avoid re-work and wastage
- identify the most appropriate tool, the setting specifications and the methods for maintaining the high precision needs throughout the work sequence
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of machines and materials
- seek learning opportunities
- use the limited workplace technology related to the selection and use of static woodworking machines.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to use of static woodworking machines
- organisational and site standards, requirements, policies and procedures for use of static woodworking machines
- types, characteristics, uses, limitations and maintenance requirements of the range of static woodworking machines used in furniture production
- manufacturing specifications for static woodworking machines

REQUIRED SKILLS AND KNOWLEDGE

- processes for evaluating the quality of static woodworking machines in terms of specifications, safety, maintainability and commercial reputation
- established communication channels and protocols
- problem identification and resolution
- workplace safety requirements and OHS legislation
- work flow within the workplace.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the use of static woodworking machines
- Interpret design requirements and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Locate and apply relevant information related to static woodworking machines
- Set up, operate and maintain static woodworking machines listed in the range statement
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - range of quality hand tools and support documentation
 - a legitimate specialist hand tool requirement
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

EVIDENCE GUIDE

	<ul style="list-style-type: none">• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge• Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other hand tools related units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Static woodworking machines	<ul style="list-style-type: none"> include table saw, thicknesser, jointer and band saw
Instructions	<ul style="list-style-type: none"> may include but not be limited to workplace procedures relating to the use and operation of tools and equipment, production planning figures, workplace instructions, including job sheets, plans, specifications, drawings and designs, workplace procedures relating to reporting and communications, and manufacturer instructions for the use of equipment and materials
Problem solving techniques	<ul style="list-style-type: none"> may include but not be limited to root cause analysis, consultation with colleagues, designers, manufacturers, technicians and maintenance personnel, resetting of machine and routine maintenance

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4012A Produce ideation drawings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to produce ideation drawings from a concept and design brief, to capture the spirit of a product visually, using integral design elements and principles.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. Production of ideation drawings applies to an industry workplace or design studio environment and involves application of skills and knowledge at a supervisory equivalent level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for production of ideation drawings	<p>1.1. Applicable OHS, legislative and organisational requirements relevant to producing ideation drawings are verified and complied with</p> <p>1.2. Design brief is reviewed, confirmed and clarified with appropriate personnel</p> <p>1.3. Type and quantity of ideation drawings to be produced are assessed from the design brief</p> <p>1.4. Drawing equipment is selected appropriate to work requirements and checked for operational effectiveness in accordance with manufacturers recommendation</p> <p>1.5. Communication with others is established and maintained in accordance with OHS requirements</p>
2. Produce ideation drawings	<p>2.1. Multiple concept drawings are produced in keeping with the design brief</p> <p>2.2. Images are represented as thumbnails exploring design ideas and to provide a sense of feeling for the product and materials used</p> <p>2.3. Human figures are included in the drawings to provide a sense of balance</p> <p>2.4. Scale ideation drawings are produced to roughly represent the detail of joints, sections or product details</p> <p>2.5. Specifications are added to the ideation drawings as reference points for working drawings</p> <p>2.6. Ideation drawings are assessed for their elements of design</p> <p>2.7. Ideation drawings are assessed for their principles of design</p> <p>2.8. Ideation drawings are modified according to the design assessment and design brief requirements</p> <p>2.9. Ideation drawing faults are recorded and reported to the appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- draw designs
- make presentations
- source information
- collect, organise and understand information related to design requirements
- maintain accurate records
- communicate ideas and information
- sequence operations
- carry out work according to ohs practices
- maintain current knowledge of interior decoration and design techniques.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for producing ideation drawings
- organisational and site standards, requirements, policies and procedures for producing ideation drawings
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- ergonomics and aesthetic values
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- setup and operation of equipment
- computer programs
- product assembly techniques
- sketching and drawing
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively produce ideation drawings to establish the sense and look of a product in story form, working through the design process in readiness for the final working drawings • Effectively apply design elements and principles to the ideation drawings • Effectively produce ideation drawings in accordance with the design brief • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for producing ideation drawings • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to producing ideation drawings • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of

EVIDENCE GUIDE	
	<p>tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures
- requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation
- requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Design brief

- is to include the aims, objectives, milestones for the design project, the point of reference for everyone, elements and principles of design and may include organisational or personal profiles, aims, target audience,

RANGE STATEMENT	
	budget, timeline, consultation requirements, colour requirements, image requirements and function
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Ideation drawings	<ul style="list-style-type: none"> are to include freehand drawings which represent a product as a story and methodology to the design brief solution. These are often drawn as thumbnail sketches
Drawing equipment	<ul style="list-style-type: none"> may include but not be limited to drawing tables, colouring pencils, pens, pastels, paints, pencils, pens, technical drawing pens, computers and computer aided drafting (CAD) software packages
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Concepts	<ul style="list-style-type: none"> are to include ideas generated to respond to the design brief through both ideation drawings or sketching and written explanation
Thumbnails	<ul style="list-style-type: none"> are to include a series of quick line drawings which explore and demonstrate the design ideas in basic terms, these are completed in freehand and can also be used to provide detail of parts in rough scale
Specifications	<ul style="list-style-type: none"> are to include the measurements, procedures by which a product is constructed and materials to be utilised
Working drawings	<ul style="list-style-type: none"> may include but not be limited to drafted technical drawings or drawings produced on computer using CAD software packages. These usually contain project specifications
Elements of design	<ul style="list-style-type: none"> may include but not be limited to line, shape, form (geometric or organic), texture, colour, and function
Principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, proportion (symmetry, asymmetry), harmony,

RANGE STATEMENT	
	contrast, pattern, movement, rhythm, unity, style, focus, scale, dominant, sub dominant or subordinate relationship, emphasis, proximity, alignment, space, anthropometry, ergonomics, arrangement, workload, materials handling capacity, skills, control, equipment capabilities, aesthetic relations, tension and development methods
Records and reports	<ul style="list-style-type: none"> may include but not be limited to the sketching and drawing method, product type, size, inspection and labelling outcomes, storage locations, quality outcomes, hazards, incidents or equipment malfunctions

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4013A Research and select furniture finishes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to research and select finishes for various furniture design solutions.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The research and recommendation of finishes applies to an industry workplace or design studio environment and involves application of skills and knowledge at a supervisory equivalent level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires employability skills in initiative and enterprise and problem solving in order to select suitable finishes. Communication skills are used to access and interpret information.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for finish research	1.1. Applicable OHS, legislative and organisational requirements relevant to researching and recommending finishes are verified and complied with 1.2. Design brief is reviewed, confirmed and clarified with appropriate personnel 1.3. Communication with others is established and maintained in accordance with OHS requirements 1.4. Client requirements and desires are reviewed, confirmed and clarified
2. Research finishes	2.1. Aesthetic requirements of the finish are assessed 2.2. New finish technologies are researched and reported 2.3. Tactile requirements of the finish in relation to the design is researched 2.4. Application methods and available expertise for the desired finish are assessed 2.5. Costs of finishes are assessed and compared 2.6. Environmental impact of finishes are assessed 2.7. Longevity and restorability of finishes are researched 2.8. Hazards associated with the use and application of finishes are researched 2.9. Quality of finishes are assessed and reported
3. Select finishes	3.1. Research information is critically analysed in the context of the design brief requirements 3.2. Finishes and their elements of design are promoted, research explained and evaluated for the client 3.3. Finishes and their principles of design are promoted, research explained and evaluated for the client 3.4. Presentation of research information is made, highlighting the findings and rationale for the finishes chosen

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and finishing procedures
- communicate ideas and information to enable confirmation of finishing requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate finishing problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- innovate and modify existing finishing techniques to suit the aesthetic and functional requirements of the product
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of finishing techniques
- seek learning opportunities
- use the workplace technology related to selecting finishes including tools, equipment, calculators and measuring devices
- evaluate finishing materials to confirm compatibility and feasibility of material usage.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to selecting finishes
- organisational and site standards, requirements, policies and procedures for the selection of finishing materials
- finishing techniques

REQUIRED SKILLS AND KNOWLEDGE

- characteristics, properties and selection criteria of finishing materials
- finishing characteristics and properties of timber being used
- matching requirements of adhesives and fasteners to timbers/materials
- types of tools and equipment and procedures for their safe use, operation and maintenance
- work flow in relation to the furniture items being made or repaired
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively research and select finishes to assist with informing the design process and arrive at a solution which meets client requirements • Effectively apply design elements and principles to the research and selection of finishes • Effectively research and select finishes in accordance with the concepts and design brief • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for researching and recommending finishes • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to researching and recommending finishes • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of

EVIDENCE GUIDE	
	<p>tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures
- requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation
- requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Design brief

- is to include the aims, objectives, milestones for the design project, the point of reference for everyone, elements and principles of design and may include organisational or personal profiles, aims, target audience,

RANGE STATEMENT	
	budget, timeline, consultation requirements, colour requirements, image requirements and function
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Clients	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Aesthetics	<ul style="list-style-type: none"> are to include the consideration of appeal to a large number of people; products are pleasing to the eye of many who view it
Finishes	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, traditional finishes, plastic coatings, UV protected coatings, liquid coatings, synthetic coatings, synthetics, paper, glass, vinyls, textiles, laminates, plastics, stainless steel, metals, veneers and stone based products
Tactile	<ul style="list-style-type: none"> is to include that perceived by the sense of touch and producing the effect of three dimensional depth
Application methods	<ul style="list-style-type: none"> may include spraying, painting, applicators, gluing, vacuum wrapping, rubbing and bonding
Environmental impact	<ul style="list-style-type: none"> is to include but not be limited to how the making and use of finishes effects the environment and how its continued use will affect those around you, energy consumption in applying the material, greenhouse gases created, waste levels and resource utilisation. Similarly what impact will be felt by reducing or stopping use of the finish
Longevity and restorability	<ul style="list-style-type: none"> are to include an analysis of how long the finish is expected to last, while maintaining

RANGE STATEMENT	
	quality of aesthetic value and how readily the finish can be upgraded, repaired or replaced
Hazards	<ul style="list-style-type: none"> may include but not be limited to toxins and gases released by some finishes and glues which may be harmful to people if not used correctly
Critical analysis	<ul style="list-style-type: none"> may include but not be limited to comparing, contrasting, reflecting, critiquing, considering merit, discussion and debate
Elements of design	<ul style="list-style-type: none"> may include but not be limited to line, shape, form (geometric or organic), texture, colour and function
Principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, dominant, sub dominant or subordinate relationship, emphasis, proximity, alignment, space, anthropometry, ergonomics, arrangement, workload, materials handling capacity, skills, control, equipment capabilities, aesthetic relations, tension and development methods

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFFDT4014A Research and select furniture materials and technology

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to research and select furniture materials and technologies in order to meet design requirements.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent research and selection including of traditional, new and emerging materials and technologies.</p> <p>This unit requires employability skills in initiative and enterprise and problem solving in order to direct the research and selection of materials and technology. Communication skills are used to access and interpret information using information technologies and complete required documentation. Self management and learning skills are applied in the review of information and arrangements to ensure project needs are met.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for material research	1.1. Applicable OHS, legislative and organisational requirements relevant to researching and recommending materials are verified and complied with 1.2. Design brief is reviewed, confirmed and clarified with appropriate personnel 1.3. Communication with others is established and maintained in accordance with OHS requirements 1.4. Client requirements and desires are reviewed, confirmed and clarified
2. Research materials	2.1. Aesthetic requirements of the material are assessed 2.2. New material technologies are researched and reported 2.3. Tactile requirements of the material in relation to the design is researched 2.4. Manufacturing processes and available expertise for the desired material are assessed 2.5. Costs of materials are assessed and compared 2.6. Environmental impact of materials are assessed 2.7. Longevity and restorability of materials are researched 2.8. Hazards associated with the use and application of materials, including handling, are researched 2.9. Quality of materials are assessed and reported
3. Select materials	3.1. Research information is critically analysed in the context of the design brief requirements 3.2. Materials and their elements of design are promoted, research explained and evaluated for the client 3.3. Materials and their principles of design are promoted, research explained and evaluated for the client 3.4. Presentation of research information is made, highlighting the findings and rationale for the materials chosen
4. Research furniture making technology	4.1. Information sources on traditional, new and emerging technologies used in the production of furniture are identified and assessed for usefulness 4.2. Traditional furniture making technologies are identified and their application analysed to determine advantages and disadvantages 4.3. New and emerging technologies are identified and analysed for relevance in furniture designs 4.4. Environmental and safety aspects of technologies are identified and implications for use assessed

ELEMENT	PERFORMANCE CRITERIA
	4.5. Information is collected and stored for future use
5. Select technology for furniture	5.1. Research information is critically analysed in the context of the design brief requirements 5.2. The relevance of technology to specific design solutions is determined and technology selected 5.3. Presentation of research information is made, highlighting the findings and rationale for the technology chosen

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential knowledge and skills and their level, required for this unit.

Required skills

- collect, organise and understand information related to work briefs, basic plans and safety procedures
- communicate ideas and information
- accurately record and maintain information
- use computer operations for internet access and searches
- analyse performance characteristics
- compare findings
- communicate with suppliers
- maintain accurate records
- clarify and check task-related information
- carry out work according to OHS practices
- recognise and respond to circumstances outside instructions or personal competence
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- maintain current knowledge of furniture design and production techniques
- use the workplace technology related to the use of tools including calculators, measuring and recording devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to researching and recommending materials
- organisational and site standards, requirements, policies and procedures for researching and recommending materials
- elements and principles of design
- aesthetic values
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- research techniques
- material types and manufacturing processes
- technologies used in furniture production
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• established communication channels and protocols• problem identification and resolution. |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively research and select materials and technology to assist with informing the design process and arrive at a solution which meets client requirements
- Effectively apply design elements and principles to the research and selection of materials and technology
- Effectively research and select materials and technology in accordance with the concepts and design brief
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for researching and recommending materials and technology
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to researching and recommending materials
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions

EVIDENCE GUIDE	
	<p>(real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline, consultation requirements and colour requirements
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language

RANGE STATEMENT	
Clients	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Aesthetics	<ul style="list-style-type: none"> are to include the consideration of appeal to a large number of people; products are pleasing to the eye of many who view it
Material	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, reconstituted products, composite materials, plastic, metal, alloys, stone based products, glass, textiles, fibreglass, foam, synthetics, cardboard, paper products or any other manipulable substance
Tactile	<ul style="list-style-type: none"> is to include that perceived by the sense of touch and producing the effect of three dimensional depth
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Environmental impact	<ul style="list-style-type: none"> is to include but not be limited to how the sourcing and use of materials effects the environment and how its continued use will effect the area the material was sourced from, energy consumption in processing the material, greenhouse gases created, waste levels and resource utilisation. Similarly what impact will be felt by reducing or stopping use of the material
Longevity and restorability	<ul style="list-style-type: none"> are to include an analysis of how long the material is expected to maintain its structure and colour, while maintaining quality of aesthetic value and how readily the material can be repaired or replaced
Hazards	<ul style="list-style-type: none"> may include but not be limited to overweight loads, bowing or cupping material causing collapse, materials handling incidents, splinters, chips or fragments being lodged in the hands or eyes
Critical analysis	<ul style="list-style-type: none"> may include but not be limited to comparing, contrasting, reflecting, critiquing, considering merit, discussion and debate
Elements of design	<ul style="list-style-type: none"> may include but not be limited to line, shape, form (geometric or organic), texture, colour, and function
Principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, dominant, sub dominant or subordinate relationship, emphasis, proximity, alignment, space, anthropometry, ergonomics, arrangement, workload, materials handling capacity, skills, control, equipment capabilities, aesthetic relations, tension and development methods

RANGE STATEMENT

Technology	<ul style="list-style-type: none"> may include but not be limited to manufacturing processes including volume and custom production processes, computer aided drafting (CAD) software programs and digital design tools, machinery, tools, techniques, laser cutting, water jet cutting, CNC router cutting, foundries and casting, and soft furnishing technology
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Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4015A Research furniture styles and movements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to research styles and movements and analyse how they influence furniture design.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for the implementation of research techniques to access a range of information sources on furniture styles and movements. It also covers the identification of influences on the design of furniture and the documentation of information for use in furniture design projects.</p> <p>This unit requires employability skills in initiative and enterprise and problem solving in order to direct the research and identify research implications. Communication skills are used to access and interpret information using information technologies and document findings. Self management and learning skills are applied in the location and analysis of new information and the assessment of the value of information sourced.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan research	1.1. Applicable <i>OHS, legislative</i> and <i>organisational requirements</i> relevant to researching furniture styles and movements are verified and complied with 1.2. <i>Design brief</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i> 1.3. Relevant <i>research sources of information</i> on furniture <i>styles and movements</i> are located 1.4. Formal and informal <i>research techniques</i> are selected to access the information 1.5. Scope of research is determined
2. Conduct research and document findings	2.1. Research is conducted using a range of research techniques 2.2. <i>Geographical research</i> is conducted to detect influences 2.3. Cultural, economic and environmental influences on furniture styles and movements are identified 2.4. Features of furniture are identified 2.5. Significant trends, designers and techniques and their influences on styles and movements are identified 2.6. Research information is applied to current furniture design trends, philosophy and surrounding buildings 2.7. Information is <i>documented</i> to develop reference materials to inform design projects 2.8. Research materials and results of the research are organised and compiled into easy to access <i>facilities</i> for further reference
3. Maintain currency with furniture styles and movements	3.1. Research sources and compiled information are regularly checked for usefulness in informing design projects 3.2. Opportunities to update and expand research of styles and movements are scheduled 3.3. Findings from research are regularly incorporated into design outcomes

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential knowledge and skills and their level, required for this unit.

Required skills

- conduct research
- read and interpret information
- maintain accurate records
- communicate within the workplace
- carry out work according to OHS practices
- conduct internet searches
- assess the value of information
- sketch and record information visually.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to researching styles and movements
- organisational and site standards, requirements, policies and procedures for researching styles and movements
- elements and principles of design
- ergonomics and aesthetic values
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- computer programs
- research techniques
- presentation techniques and equipment
- product assembly techniques
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively research furniture styles and movements to assist with informing current design practices, challenging and adapting influences into current designs
- Effectively apply design elements and principles to the research of styles and movements
- Effectively research styles and movements in accordance with the concepts and design brief
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for researching styles and movements
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to researching styles and movements
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package.
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge.
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application.
- Assessment may be applied under project related conditions

EVIDENCE GUIDE	
	<p>(real or simulated) and require evidence of process.</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.• Assessment may be in conjunction with assessment of other units of competency.
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones for the design project, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline and consultation requirements
Research sources	<ul style="list-style-type: none"> may include but not be limited to scientific texts, historical texts and journals, oral histories, journals, periodicals, images, objects, films, videos, micra fish, internet, technical information, stories, libraries, museums, universities and collection catalogues
Information	<ul style="list-style-type: none"> may include but not be limited to philosophy, world histories, cultural issues, spiritual issues, religious issues, histories of furniture design, linguistics, aesthetics, politics, gender and identity issues, land and place, signs and symbols, criticism,

RANGE STATEMENT	
	new technologies and light
Styles and movements	<ul style="list-style-type: none"> • may include but not be limited to furniture designers and key figures, such as Frank Lloyd Wright, Charles Eames and Antonio Gaudi • may include but not be limited to schools and movements, such as Bauhaus in Germany, Federal style in the United States, and Art Nouveau in Europe • may include but not be limited to periods and styles, such as the neo-classical Adams style, the simple lines of Art Deco, and the asymmetrical style of Rococo • may include but not be limited to decorative details, such as rosettes, foots, hinges, and mouldings
Research techniques	<ul style="list-style-type: none"> • may include but not be limited to internet searches, interview, discussion, books, journals, film, documentaries and first hand review
Geographical research	<ul style="list-style-type: none"> • may include but not be limited to international, national, regional and local influences
Facilities	<ul style="list-style-type: none"> • may include but not be limited to files, computer files, indices, databases, charts and diagrams
Documented	<ul style="list-style-type: none"> • may include but not be limited to freehand drawings, sketches, ideation drawings, working drawings, computer generated documentation, pictures, illustrations, photos, multimedia presentations, materials or theme boards, specifications and measurements

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4016A Select, use and maintain hand tools for the creation of custom furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to select and use hand tools in applications relating to the custom furniture making sector of the furnishing industry. It also includes the manufacture of specialist hand tools to support unique functions.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furniture maker operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at the highly skilled craftsman or artisan level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires employability skills in planning and organising, technology use and problem solving in order to correctly select hand tools for specific woodwork operations. Communication skills are used to access and interpret work requirements and self management is applied to ensure ongoing performance of tools is maintained.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hand tools	1.1. Applicable <i>legislative, OHS</i> and <i>organisational requirements</i> relevant to the selection and use of hand tools are verified and complied with 1.2. Type and range of hand tools, their functions, manufacturing specifications and quality reputations are identified and researched
2. Select hand tools	2.1. <i>Hand tools</i> most appropriate for the job are selected 2.2. Selected hand tools are checked for serviceability, precision settings, maintenance compliance and safety 2.3. <i>Faults</i> are rectified or passed to qualified persons for rectification 2.4. Equipment is selected to hold or support material for hand tools application where applicable
3. Manufacture specialist hand tools	3.1. The need for specialist hand tools is established after full research and discounting of existing capabilities and availabilities 3.2. The design of the specialist tool is completed and verified 3.3. The material for the specialist tool is selected after full consideration of the functions and the material options 3.4. The specialist tool is manufactured to specification 3.5. The specialist tool is tested and modified to satisfy the function 3.6. Design specifications are documented and retained in the enterprise filing systems
4. Use hand tools	4.1. Hand tools are safely located when not in immediate use 4.2. Material is located and held in position for hand tool application 4.3. Hand tools safety requirements are complied with throughout the operation 4.4. The full capability of the hand tool is professionally applied and adjusted to achieve the required specificity of outcome 4.5. Mid-operation maintenance is carried out to ensure continuing achievement of specified outcomes
5. Clean up work area and tools	5.1. All tools are cleaned, maintained and stored in accordance with manufacturers' specification 5.2. Equipment is cleaned, maintained and stored 5.3. Work area is cleared and waste removed 5.4. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- interpret and apply technical and quality information in the identification, selection and maintenance of commercially superior hand tools
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques which relate to the use of hand tools to avoid re-work and wastage
- identify the most appropriate tool, the setting specifications and the methods for maintaining the high precision needs throughout the work sequence
- recognise and respond to circumstances outside instructions or personal competence
- design and manufacture specialist hand tools required for unique but repetitive tasks/functions
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- seek learning opportunities
- use the limited workplace technology related to the selection and high precision use of hand tools.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to use of hand tools
- organisational and site standards, requirements, policies and procedures for use of hand tools
- types, characteristics, uses, limitations and maintenance requirements of the range of hand tools used in furniture production

REQUIRED SKILLS AND KNOWLEDGE

- manufacturing specifications for hand tools
- processes for evaluating the quality of hand tools in terms of specifications, safety, maintainability and commercial reputation
- established communication channels and protocols
- techniques for the design of specialised hand tools and the manufacturer of one-off tools
- problem identification and resolution
- workplace safety requirements and OHS legislation
- work flow within the workplace

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the use of hand tools
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Locate and apply relevant information related to hand tools
- Adopt and carry out correct procedures prior to and during use of the range of hand tools stipulated in the Range Statement
- Design and manufacture one specialist hand tool for a specified production function
- Tune and sharpen:
 - chisels
 - hard planes
 - spokeshaves
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • range of quality hand tools and support documentation • a legitimate specialist hand tool requirement • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other hand tools related units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> may include but not be limited to workplace procedures relating to the use and operation of tools and equipment, production planning figures, workplace instructions including job sheets, plans, specifications, drawings and designs, workplace procedures relating to reporting and communications, and manufacturer instructions for the use of equipment and materials
Hand tools	<ul style="list-style-type: none"> may include, but not be limited to hand planes, chisels, hand saws, spokeshave, hammer, mallet, marking-out tools, files, rasps, scraper, screwdrivers, hand drill, straight edges, knives, clamps, steel/bronze wool, sand paper, brushes, stone, whetstone and grinder
Fault reporting	<ul style="list-style-type: none"> may be verbal or written

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT4017A Set up and operate a wood turning lathe to produce off-centre work

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to maintain, set up and operate a woodturning lathe and holding devices used to produce off-centre work for the production of furniture and building work.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furniture maker operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at the highly skilled craftsman or artisan level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires employability skills in planning and organising, technology use and problem solving in order to correctly set up wood turning lathe to perform specific woodwork operations. Communication skills are used to access and interpret work requirements and self management is applied to ensure ongoing performance of lathe is maintained.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational requirements</i> and instructions relevant to <i>lathe</i> operations are verified and complied with</p> <p>1.2. <i>Work instructions</i> are used to determine job requirements including design, quality, materials, equipment and quantity</p> <p>1.3. Material for turning is selected and inspected for safety</p> <p>1.4. The wood lathe, holding devices, tools and gauges are identified and checked for safe and efficient operations</p> <p>1.5. <i>Procedures</i> are determined for minimising waste</p> <p>1.6. Procedures are identified for maximising energy efficiency while completing the job</p>
2. Set up machines with holding devices	<p>2.1. Lathe speed is selected in accordance with job requirements, safety considerations and manufacturers' recommendations</p> <p>2.2. <i>Holding devices</i> are mounted in accordance with job requirements and safety considerations</p> <p>2.3. Necessary gauges and tools are selected for job</p>
3. Operate lathe	<p>3.1. Lathe start up instructions are carried out in accordance with manufacturer instructions</p> <p>3.2. Material is mounted in lathe in accordance with manufacture instructions, safe handling procedures and standard workplace operating procedures</p> <p>3.3. Lathe is operated in accordance with its designed capacity, purpose and to manufacturers' recommendations</p> <p>3.4. Lathe operation is monitored to ensure produce quality and output</p> <p>3.5. Waste quantities are checked and minimised</p> <p>3.6. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures</p> <p>3.7. Problems with the required work and/or operation of the machine are identified and reported to the appropriate person</p>
4. Clean up work area and maintain equipment	<p>4.1. Materials that can be reused are collected and stored</p> <p>4.2. Waste and scraps are removed following workplace procedures</p> <p>4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures</p> <p>4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures</p>

ELEMENT	PERFORMANCE CRITERIA
	4.5. Operator maintenance is completed in accordance with manufacturer specifications and workplace

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- interpret and apply technical and quality information in the identification, selection and maintenance of wood turning tools
- interpret, apply and elaborate on specifications for wood turning products
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques which relate to hand carving to avoid re-work and wastage
- identify the most appropriate tool, the specifications and the methods for maintaining the high precision needs throughout the wood turning sequence
- recognise and respond to circumstances outside instructions or previously recognised personal competence
- adapt designs to incorporate the impact of wood carving operations on the intended materials
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of wood turning tools and materials
- maintain current knowledge of equipment installation techniques
- seek learning opportunities
- use the limited workplace technology related to the selection and high precision use of wood turning tools and equipment.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to wood turning
- terminology covering wood turning operations and materials

REQUIRED SKILLS AND KNOWLEDGE

- types, characteristics, used and limitations of timber species for wood turning
- techniques for the design and documentation of specifications for wood turned products
- organisational and site standards, requirements, policies and procedures for turning of wood
- types, characteristics, uses, limitations and maintenance requirements of the range of tools used in wood turning
- processes for evaluating the quality of wood turning tools in terms of specifications, safety, maintainability and commercial reputation
- the range of commonly used wood turning techniques
- established communication channels and protocols
- problem identification and resolution
- workplace safety requirements and OHS legislation
- work flow within the workplace.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the use of hand tools
- Interpret product design and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Identify, set up and maintain holding devices, safe speed selection and balance limitations to complete the following:
 - freehand turn articles between centres that have multiple axis
 - complete a minimum of eight hand turned articles to detail between centres
 - manufacture templates and gauges
 - scroll cut material prior to turning
 - complete a minimum of four hand turned articles to detail with grain at 90(to the axis of the lathe
- Work effectively with others
- Modify activities to cater for variations

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • eight significant wood turning requirements including design brief or specification • a range of optional timbers • range of quality wood turning tools • materials for the preparation of the product for finishing
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other related units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling, including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Lathes	<ul style="list-style-type: none"> are to be manually operated using hand held tools
Instructions	<ul style="list-style-type: none"> may include but not be limited to workplace procedures relating to the use and operation of tools and equipment, production planning figures, workplace instructions including job sheets, plans, specifications, drawings and designs, workplace procedures relating to reporting and communications, and manufacturer instructions for the use of equipment and materials
Procedures	<ul style="list-style-type: none"> may include but not be limited to drawing articles from plans or samples, manufacturing pencil and scratch gauges, freehand grinding of tools and the set up and operation of the lathe to produce turned components

RANGE STATEMENT**Holding devices**

- are to be specific to the job and are to include faceplates, scroll checks and function checks

Unit Sector(s)**Unit sector**

Furniture design and technology.

Competency field**Competency field****Co-requisite units****Co-requisite units**

LMFFDT4018A Produce templates and jigs for custom made furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to produce templates and jigs for custom made furniture.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of fine woods operations. The competency applies to a workshop environment and involves application of skills and knowledge at a craftsman or artisan level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires employability skills in initiative and enterprise, planning and organising and problem solving in order to produce templates and jigs for custom made furniture. Communication skills are used to access and interpret work requirements and self management is applied to ensure project requirements are met. Technology skills are applied to use and produce these tools.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to producing templates and jigs for custom made furniture</p> <p>1.2. Instructions, plans or design briefs are read and interpreted to identify processes and materials required to complete work tasks</p> <p>1.3. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.4. Sequence of work is planned and documented, including the starting point, to ensure efficiency and quality outcomes</p> <p>1.5. Quality checking procedures are developed and documented for each step in the process</p>
2. Plan for the production of templates or patterns	<p>2.1. Size requirements are checked in relation to the production process and finishing capacity of the workplace</p> <p>2.2. Material for pattern or template is identified for approximate size and characteristics</p> <p>2.3. Procedures for using pattern development instruments and tools are checked and equipment is prepared for use</p> <p>2.4. Each dimension is measured, exploded and plotted maintaining appropriate angles, arcs and curves</p> <p>2.5. Visual inspection and measurements are used to compare pattern dimensions and shapes with drawings and specifications</p>
3. Complete templates or patterns	<p>3.1. Equipment and tools are used following normal workplace procedures</p> <p>3.2. Pattern or template is completed ensuring that the pattern indicates completion date and original drawing details</p> <p>3.3. Required workplace approval of pattern or template is obtained</p> <p>3.4. Plans are marked with notations for workplace requirements, including authorship, process or customer requirements, authorisation and any review dates</p> <p>3.5. Plans are copied and filed as required according to workplace policies and procedures</p>
4. Design and construct jig for custom furniture	<p>4.1. Design of proposed jig or fixture is produced</p> <p>4.2. Production process incorporating jig is planned</p> <p>4.3. Tools and equipment are used following normal workplace procedures</p>

ELEMENT	PERFORMANCE CRITERIA
	4.4. Jig is constructed as per design and within tolerances 4.5. Jig is used to produce prototype to ascertain its adherence to set tolerances and to assess its match to original design 4.6. Jig is adjusted as required to meet requirements for custom made furniture design
5. Complete housekeeping	5.1. Unused materials are stored or recycled as required 5.2. Tools and equipment are cleaned, maintained and stored appropriately 5.3. Faulty or defective equipment is tagged and reported in accordance with workplace practices 5.4. Work area is cleaned and rubbish disposed of appropriately 5.5. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate production problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- seek learning opportunities
- use workplace technology related to the production of templates, patterns and jigs, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the production of templates and jigs
- organisational and site standards, requirements, policies and procedures for the production of templates and jigs
- types, characteristics, uses and limitations of templates and jigs
- techniques for the manufacture and application of templates and jigs
- the interpretation of plan representation of furniture design
- the preparation of drawings/set outs
- types, characteristics, uses and limitations of tools and equipment and procedures for their safe use, operation and maintenance
- work flow in relation to furniture production

REQUIRED SKILLS AND KNOWLEDGE

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| <ul style="list-style-type: none">• environmental protection requirements• established communication channels and protocols• problem identification and resolution. |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for producing templates and jigs
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Prepare a minimum of two templates and two jigs for custom furniture
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - realistic task for the preparation/production of a veneer
 - realistic tasks related to the application of veneers
 - materials and equipment relevant to the production and application of veneers
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge• Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other related units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling, including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> may include but not be limited to workplace instructions including job sheets, plans, specifications, drawings and designs, workplace procedures relating to reporting and communications, and manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> may include but not be limited to computer numeric controlled machines, static woodworking machines and relevant hand tools, routers , spindle moulders, panel saws, copy shapers and radial arm saws
Materials	<ul style="list-style-type: none"> may include but not be limited to manufactured board, solid timbers and composite materials

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT5001A Apply ergonomics, anthropometrics and proxemic considerations to a product

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to apply ergonomics, anthropometrics and proxemic considerations to a product applying integral design elements and principles, based on a given design brief.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The application of ergonomics, anthropometrics and proxemic considerations to a product applies to an industry workplace or design studio environment and involves application of skills and knowledge at a para-professional level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires employability skills in communication and problem solving in order to analyse designs and complete documentation. Planning and organising and technology skills are applied in the application of information.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for application	<p>1.1. Applicable OHS, legislative and organisational requirements relevant to applying ergonomics, anthropometrics and proxemic considerations to a product are verified and complied with</p> <p>1.2. Design brief is reviewed, confirmed and clarified with appropriate personnel</p> <p>1.3. Client requirements and desires are reviewed, confirmed and clarified</p> <p>1.4. Communication with others is established and maintained</p> <p>1.5. Problems or underlying factors to be addressed by the design brief are verified</p> <p>1.6. Elements of design are diagnosed for the intended design brief</p> <p>1.7. Principles of design are diagnosed for the intended design brief</p>
2. Apply ergonomics, anthropometrics and proxemics	<p>2.1. Concepts for the proposed solution to the design brief are reviewed for ergonomic, anthropometric and proxemic considerations</p> <p>2.2. Human body functions are assessed in the context of solutions for possible problems in supporting bodies of all shapes and sizes</p> <p>2.3. Ergonomic factors of a design are interrogated and refined</p> <p>2.4. Anthropometric factors of a design are interrogated and refined</p> <p>2.5. Proxemic considerations of a design are interrogated and reviewed</p> <p>2.6. Sample maquette and prototype are reviewed in accordance with ergonomics, anthropometrics and proxemics</p> <p>2.7. Different solutions to satisfy the requirements of the design brief are explored and reviewed</p> <p>2.8. Final working drawings in full scale are developed to test the ergonomic values of a design</p> <p>2.9. Specifications are reviewed and compiled in readiness for production</p> <p>2.10. Concept is planned for manufacture taking into account available equipment, resources, production sequences, schedules and timelines</p>

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level, required for this unit.

Required skills

- collect, organise and understand information related to furniture design
- communicate ideas and information
- prepare documentation
- work with others and in a team to evaluate design features
- recognise and respond to circumstances outside instructions or personal competence
- use mathematical ideas and techniques to correctly complete assess designs
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of ergonomics, anthropometrics and proxemic considerations
- maintain current knowledge of assessment methods
- seek learning opportunities
- use the workplace technology related to the electronic communication with colleagues and clients as well as documenting and presenting information.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for applying ergonomics, anthropometrics and proxemic considerations to a product
- organisational and site standards, requirements, policies and procedures for applying ergonomics, anthropometrics and proxemic considerations to a product
- elements and principles of design
- ergonomics, anthropometrics, proxemics and aesthetic values
- human body functions
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- computer programs
- product machining, assembly and finishing techniques
- sketching and drawing
- storage systems and labelling
- Australian Standards for product design
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements

REQUIRED KNOWLEDGE AND SKILLS

- | |
|---|
| <ul style="list-style-type: none">• established communication channels and protocols• problem identification and resolution. |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively work through the application of ergonomics, anthropometrics and proxemic considerations to enhance a product for a design brief
- Effectively apply design elements and principles to the application of ergonomics, anthropometrics and proxemic considerations to a product
- Effectively applying ergonomics, anthropometrics and proxemic considerations to a product in accordance with a design brief
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for applying ergonomics, anthropometrics and proxemic considerations to a product
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to applying ergonomics, anthropometrics and proxemic considerations to a product
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks

EVIDENCE GUIDE	
	<p>and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones for the design project, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline and consultation requirements
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to

RANGE STATEMENT	
	individual social and cultural differences, control of tone of voice and body language
Elements of design	<ul style="list-style-type: none"> may include but not be limited to line, shape, form (geometric or organic), texture, colour, and function
Principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, dominant, sub dominant or subordinate relationship, emphasis, proximity, alignment, space, anthropometry, ergonomics, arrangement, workload, materials handling capacity, skills, control, equipment capabilities, aesthetic relations, tension and development methods
Concepts	<ul style="list-style-type: none"> are to include ideas generated to respond to the design brief through both ideation drawings or sketching and written explanation
Ergonomics	<ul style="list-style-type: none"> are to include the study of the efficiency of persons in their working environment
Anthropometrics	<ul style="list-style-type: none"> are to include the scientific study of the measurements of the human body
Proxemics	<ul style="list-style-type: none"> are to include the study of socially conditioned spatial factors in ordinary human relations
Maquette	<ul style="list-style-type: none"> is to include a miniature version of the intended final product to establish if the elements and principles of design have been achieved. These are usually produced from cardboard or scrap timber
Prototype	<ul style="list-style-type: none"> is usually a full size replica of the intended product outcome based on concept sketches and free hand development drawings, these are usually produced from stiff cardboard, scrap timber or possibly even moulding clay
Working drawings	<ul style="list-style-type: none"> may include but not be limited to drafted technical drawings or drawings produced on computer using computer aided drafting software packages. These usually contain project specifications
Specifications	<ul style="list-style-type: none"> are to include the measurements, procedures by which a product is constructed and materials to be utilised
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT5002A Apply resources sustainably

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to apply resources sustainably, ensuring that the impact of a design does not have significant impact on the environment and its precious resources.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. Applying resources sustainably applies to an industry workplace or design studio environment and involves application of skills and knowledge at a para-professional level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit includes employability skills in planning and organising, problem solving and communication to access, interpret, apply and document information relating to sustainability.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess raw sources of material	1.1. Applicable <i>OHS, legislative</i> and <i>organisational requirements relevant</i> to applying resources sustainably are verified and complied with 1.2. <i>Design brief</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i> 1.3. <i>Communication</i> with others is established and maintained in accordance with OHS requirements 1.4. <i>Materials</i> are assessed from their <i>source</i> taking account of where it derived from and its abundance 1.5. Materials are assessed for their <i>ecological and environmental impact</i> 1.6. Materials are assessed for their availability and <i>sustainability</i>
2. Assess the sustainability of a design	2.1. User needs and desires are assessed and documented 2.2. Material choice and use as stated in the specifications is audited and assessed 2.3. <i>Product lifecycle</i> analysis is evaluated 2.4. Intended <i>manufacturing processes</i> including <i>assembly</i> and <i>finishing</i> are assessed for their impact on the environment 2.5. Final <i>documentation</i> outlining the full analysis of the designs impact on the environment is compiled and produced as a report
3. Apply resources sustainably	3.1. <i>Alternative solutions</i> to a specified material are explored and reported 3.2. <i>Recycled materials</i> are considered and analysed as possible solutions to the material requirements for a design brief 3.3. <i>Waste products</i> are used in the production of models, maquettes and prototypes 3.4. <i>Sustainable materials</i> are detected and used in preference to materials in short supply 3.5. Thinner grades of material, veneers or <i>man-made materials</i> are evaluated as options for material use 3.6. Government legislation on resource sustainability is researched and adhered to

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- accurately recording and maintaining information relating to the furniture making and design functions
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use
- accurately recording and maintaining information relating to the design of products
- recognise and respond to circumstances outside instructions or personal competence
- efficiently and safely contribute to innovative design process
- plan and organise activities, including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- learning of thinking, problem solving and conceptual techniques
- maintain current knowledge of tools and materials
- maintain current knowledge of furniture making and designing techniques
- seek learning opportunities
- use the workplace technology related to the use of tools, including calculators, measuring and recording devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to applying resources sustainably
- organisational and site standards, requirements, policies and procedures for applying resources sustainably
- material sustainability

REQUIRED KNOWLEDGE AND SKILLS

- elements and principles of design
- ergonomics and aesthetic values
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products, sources and defects
- forest management and sustainability
- resource utilisation
- waste and waste management
- computer programs
- product assembly techniques and equipment capabilities
- sketching and drawing
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively apply resources sustainably in the design and development of products in accordance with the elements and principles of design
- Effectively measure the impact of design upon the environment
- Effectively produce a report on the impact study outcomes of a sustainable resources
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for applying resources sustainably
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to applying resources sustainably
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions

EVIDENCE GUIDE	
	<p>(real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> may include but not be limited to the aims, objectives, milestones for the design project, the point of reference for everyone, elements and principles of design and may include organisational or personal profiles, aims, target audience, budget, timeline, consultation requirements, colour requirements, image requirements and function
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of

RANGE STATEMENT	
	voice and body language
Material	<ul style="list-style-type: none"> may include but not be limited to native timber (native and imported), man-made timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Sources	<ul style="list-style-type: none"> may include but not be limited to the origin of the raw material including, the type and location wood was derived from, how and where it was processed, graph impact growth and available seasoning lead time, the mining source of metal or alloys and how these were processed, the formulas for the composition of plastics, the origin of textiles and how these were milled
Ecological and environmental impact	<ul style="list-style-type: none"> may include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will affect the area it has been sourced from, energy consumption in achieving the material, greenhouse gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source
Sustainability	<ul style="list-style-type: none"> is to include the amount of resource widely available based on demand and its capacity to renew or be renewed
Documentation	<ul style="list-style-type: none"> may include but not be limited to working notes, hand written records, typed information and reports
Product lifecycle	<ul style="list-style-type: none"> is the evolution of a product from its raw source, through its inception, development, manufacture, completion and time as a completed product until potential renewal
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Assembly methods	<ul style="list-style-type: none"> may include but not be limited to nailing, gluing, screwing, welding, pressing, sewing, bonding, jointing or connecting various materials
Finishing	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils and plastic coatings
Alternative solutions	<ul style="list-style-type: none"> may include but not be limited to the use of plantation timber in preference to old growth timber, metal alloys, recycled materials, composite stone and resins
Recycled materials	<ul style="list-style-type: none"> may include but not be limited to pre-used building supplies, materials previously used in product development, old stone, glass or textiles

RANGE STATEMENT	
Waste products	<ul style="list-style-type: none"> may include but not be limited to scrap materials, off-cuts, processing waste and discarded material
Sustainable materials	<ul style="list-style-type: none"> see alternative solutions
Man-made materials	<ul style="list-style-type: none"> may include but not be limited to medium density fibreboard, composite stone, alloys and resins

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT5003A Assess and resolve technical integrity of a design

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to assess and resolve technical integrity of a design for a product using fundamental design elements and principles.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. Assessment and resolution of technical integrity for a design applies to an industry workplace or design studio environment and involves application of skills and knowledge at a para-professional level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit includes employability skills in initiative and enterprise and problem solving to analyse designs and resolve design issues. Communication skills are applied to conduct research and interpret and document information. Learning is applied in openness to find new information.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for assessment	1.1. Applicable OHS, legislative and organisational requirements relevant to assessing and resolving technical integrity of a design are verified and complied with 1.2. Design brief is reviewed, confirmed and clarified with appropriate personnel 1.3. Communication with others is established and maintained 1.4. Problems or underlying factors being addressed by the design brief are verified 1.5. Client requirements and desires are reviewed, confirmed and clarified 1.6. Elements of design are assessed for the intended outcome 1.7. Principles of design are assessed for the intended outcome
2. Assess technical integrity	2.1. Requirements of the brief are prioritised and assessed for conflicts 2.2. Integrity of a design is tested for structural and ergonomic compliance 2.3. Mechanical strength and stress points of a design are evaluated and reported 2.4. Success and failure points of a design are analysed and reviewed 2.5. Distinctive and strong points of a design are highlighted and recorded 2.6. Level of innovation and technical merit of a design is assessed and recorded
3. Resolve technical integrity	3.1. Most suitable materials, equipment and manufacturing processes to resolve the technical faults of a brief are assessed to comply with the requirements 3.2. Alternative design solutions for a technical failure are researched and instigated 3.3. Restoration of existing designs are considered and acted upon for viable cases 3.4. Final documentation outlining the full analysis of the design brief is compiled and produced as a report

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- accurately recording and maintaining information relating to the furniture making and design functions
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use
- recognise and respond to circumstances outside instructions or personal competence
- efficiently and safely contribute to innovative design process
- plan and organise activities, including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- learning of thinking, problem solving and conceptual techniques
- maintain current knowledge of tools and materials
- maintain current knowledge of furniture making and designing techniques
- seek learning opportunities
- use the workplace technology related to the use of tools, including calculators, measuring and recording devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to assessing and resolving technical integrity of a design
- organisational and site standards, requirements, policies and procedures for assessing and resolving technical integrity of a design
- environmental protection requirements
- established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- problem identification and resolution
- elements and principles of design
- technical integrity of design
- ergonomics and aesthetic values
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- product assembly techniques and equipment capabilities
- sketching and drawing
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively assess and resolve technical integrity of a design, work through the design process assessing the requirements and recording the intended resolution
- Effectively apply design elements and principles to assess and resolve technical integrity of a design
- Effectively produce a report on the intended resolution as a result of assessing and resolving technical integrity of a design
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for assessing and resolving technical integrity of a design
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to assessing and resolving technical integrity of a design
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> may include but not be limited to the aims, objectives, milestones for the design project, the point of reference for everyone, elements and principles of design and may include organisational or personal profiles, aims, target audience, budget, timeline, consultation requirements, colour requirements, image requirements and function
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of

RANGE STATEMENT	
	voice and body language
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Elements of design	<ul style="list-style-type: none"> may include but not be limited to line, shape, form (geometric or organic), texture, colour, and function
Principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, dominant, sub dominant or subordinate relationship, emphasis, proximity, alignment, space, anthropometry, ergonomics, arrangement, workload, materials handling capacity, skills, control, equipment capabilities, aesthetic relations, tension and development methods
Conflicts	<ul style="list-style-type: none"> may include but not be limited to technical aspects of a design which appear or act in different manner to the intent of the product design
Integrity	<ul style="list-style-type: none"> may include but not be limited to the intended structural qualities and construction methods of a designed product
Structural	<ul style="list-style-type: none"> may include but not be limited to construction methods for all or parts of a designed product which are not intended to fail under regular and continual use
Ergonomics	<ul style="list-style-type: none"> is to include the study of the efficiency of persons in their working environment
Mechanical strength	<ul style="list-style-type: none"> is to include the strength of parts or joints under the pressure of operation in general usage situations
Material	<ul style="list-style-type: none"> may include but not be limited to native timber (native and imported), man-made timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Equipment	<ul style="list-style-type: none"> may include but not be limited to hand tools, static machinery, portable power tools and computer numerically controlled equipment may also include procedures for lock out protecting operators and co-workers from accidental injury by isolating the machine from the power source
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT5004A Develop self as a furniture designer

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcome required to develop self as a furniture designer technically, professionally and artistically through research and reflection.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furniture design and making operations. The competency applies to a custom furniture business or design support environment and involves application of skills and knowledge at a Diploma level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires employability skills in initiative and enterprise, problem solving, self management and learning in order to reflect on own skills and identify and act on opportunities for improvement. Teamwork and communication skills are applied when working with others in the design process and expressing ideas.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Critically analyse and evaluate products and images for visual aesthetics	1.1. Qualities of three dimensional <i>principles and elements of design</i> are identified and reviewed from reference material 1.2. Products and images are evaluated for three dimensional elements and principles and recorded in accordance with enterprise practice 1.3. Cultural and psychological factors of visual appeal are identified from reference documents and recorded in accordance with <i>enterprise practice and requirements</i> 1.4. Products and images are assessed for cultural and psychological factors influencing their aesthetic appeal
2. Use a visual language in own work	2.1. Own work is documented and collated 2.2. Works are analysed for contemporary visual aesthetic design elements and principles 2.3. <i>Visual language</i> is developed within own work 2.4. Visual language in own work is recognised and recorded in accordance with enterprise practice
3. Critically analyse social and ethical issues in contemporary society affecting furniture design	3.1. Details of <i>social and ethical issues</i> in contemporary society which may impact on the furniture are identified and documented in accordance with enterprise practice 3.2. Issues are analysed against the practice of furniture design and conclusions are recorded in accordance with enterprise practice 3.3. Conclusions are used to influence new design developments
4. Recognise historical context of furniture products	4.1. Details of furniture from <i>historical periods</i> are identified from reference materials and existing examples and recorded in accordance with enterprise practice 4.2. Historical design elements and details are identified in own design proposals and product 4.3. Contemporary design elements are assessed against details of historical periods and recorded in accordance with enterprise practice
5. Critically analyse and recognise the impact of art and design movements on the development of products	5.1. Dominant ideas and details of <i>art and design</i> movements are identified from reference material or product examples 5.2. Product proposals are assessed for visual attributes and results are recorded in accordance with enterprise practice 5.3. Design attributes are compared with the dominant ideas and details of art and design movements and results recorded in accordance with enterprise practice.

ELEMENT	PERFORMANCE CRITERIA
6. Identify technical skills needs to improve own practice of designing products	<p>6.1. Details of current design skills are identified and documented</p> <p>6.2. Needs analysis for improvement of own design practice is undertaken</p> <p>6.3. Details of technical skills required to improve are documented</p> <p>6.4. Training opportunities for required technical skills are identified and documented</p>
7. Establish networks with other furniture designers, makers and other design professionals	<p>7.1. Career relationships with other design professionals are mapped</p> <p>7.2. New areas of network possibilities are identified and documented</p> <p>7.3. New network contacts are established with other furniture design professionals</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to visual appeal of a product
- communicate ideas, information with other furniture designers
- prepare folio of work produced
- work with others to create networks with furniture design professionals
- identification of skills needs and prepare a plan to develop skills required
- recognise and respond to circumstances outside instructions or personal competence
- adopt a proactive relationship with other furniture designers
- develop new networks
- plan activities covering the choice of research methods, the preparation and layout of the folio of own work
- use analytical methods to compare own work to social norms
- clarify and confirm skills needs
- plan reflection within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal development goals
- satisfy the competency requirements for the job
- maintain current knowledge of art and design
- maintain current knowledge of ethical and social issues
- seek learning opportunities
- networking skills
- use the workplace technology related to the research and documentation of historical information
- use electronic communication methods to develop networks.

Required knowledge

- art and design movements
- elements and principles of design
- furniture historical periods
- cultural factors on aesthetic appeal
- psychological factors on aesthetic appeal
- critical analysis techniques
- contemporary techniques and technologies for preparation and presentation of design information
- established communication channels and protocols
- needs identification.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Report on design principles and elements for at least three other furniture designer's product
- Produce a documented folio of own work
- Identify visual language in own work and further develop this through subsequent projects
- Document ethical issues in design, manufacture and society in accordance with enterprise practice
- Identify and document art and design movements elements and historical context in own product
- Identify and document personal skills needs, including:
 - conduct and document a needs analysis on required design skills
 - prepare and produce a training plan and career map
 - establish and maintain networks with other design professionals
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - a realistic furniture makers product
 - specific information covering aesthetic appeal
 - historical context, art and design movements
 - details of enterprise practice

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • technical skills needs of contemporary furniture makers
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with other related units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Principles and elements of design	<ul style="list-style-type: none"> may include but not be limited to point, line, plane, volume, shape, form, tone, colour, surface, texture, scale, size, vertex, edge, face, position, direction, space, balance, movement, proportion, rhythm, repetition, pattern, relief, mass and movement
Enterprise requirements	<ul style="list-style-type: none"> may include but not be limited to legal, enterprise, guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Visual language	<ul style="list-style-type: none"> may include but not limited to the visual traits in work and proposals which communicate clearly information needed
Social and ethical issues	<ul style="list-style-type: none"> may include but not be limited to issues relating to social justice, environmental sustainability, biodiversity, cultural heritage and social responsibility of furniture makers
Historical periods	<ul style="list-style-type: none"> may include but not be limited to historical periods of furniture styles from Egyptian to deconstructivism may also include but not limited to design schools and groups from the 20th and 21st centuries
Art and design movements	<ul style="list-style-type: none"> may include but not be limited to historical art and design movements, schools and groups from Egyptian to deconstructivism, and European design schools and groups

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT5005A Construct custom furniture using advanced techniques

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to construct original and unique custom furniture using or adapting traditional and innovative construction techniques. It includes interpreting and adapting design specifications that are compatible with the product material, purpose and style of the furniture.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furnishing maker operations. The competency applies to a workshop and on site environment and involves application of skills and knowledge at a highly skilled artisan level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires employability skills in planning and organising, problem solving and technology in order to apply advanced techniques in the making of custom furniture. Self management is applied to ensure quality standards are met.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to constructing custom furniture are verified and complied with</p> <p>1.2. Instructions, plans and design documents are read and interpreted to identify furniture construction and finishing requirements</p> <p>1.3. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.4. Product purpose, context, furniture style and construction materials are identified</p> <p>1.5. Work sequence covering each step in the construction process including sub-assemblies, is planned and documented to enterprise requirements</p> <p>1.6. Quality checking procedures are developed and documented for each step in the construction process</p>
2. Curve and shape components	<p>2.1. Techniques for bending, forming and shaping components are identified, evaluated and confirmed as being appropriate for the construction requirement</p> <p>2.2. Component specifications are set out according to work instructions and materials marked according to industry practices</p> <p>2.3. Tools, machines and equipment are used in accordance with safety requirements and manufacturer specifications</p> <p>2.4. Materials are bent, formed and shaped in accordance with the production plan and workplace procedures</p> <p>2.5. Components are checked against specified tolerances, fit and accuracy</p>
3. Veneer components	<p>3.1. Suitable veneer material is identified, evaluated and selected</p> <p>3.2. Tools, machines and equipment are used in accordance with safety requirements and manufacturer specifications</p> <p>3.3. Veneer components and materials are measured, marked and cut to size</p> <p>3.4. Veneers are prepared for application and laid out</p> <p>3.5. Suitable joining processes to backing and adjacent veneers are selected and prepared</p> <p>3.6. Adhesives are applied according to workplace procedures and/or manufacturer instructions</p> <p>3.7. Rough veneering components are produced in accordance</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>with the production plan and workplace procedures, including the use of protective equipment</p> <p>3.8. Final trim and finishing are completed to specifications</p> <p>3.9. Work is checked against required quality standards</p> <p>3.10. Any non-conformity with the required quality standard is rectified</p>
4. Make joints	<p>4.1. Joints are identified and type of joint to be used is selected and adapted/ designed as necessary</p> <p>4.2. Tools, adhesives and fasteners are selected to match the joint type</p> <p>4.3. Cutting and joining lines are marked out to suit joint type</p> <p>4.4. Measurements and calculations are checked for accuracy to ensure quality outcomes</p> <p>4.5. Material features are identified and optimal usage criteria are observed</p> <p>4.6. Material is cut to specification, inspected and prepared for joining</p> <p>4.7. Material is joined in accordance with the job specifications</p> <p>4.8. Fasteners and adhesives are used to make joints firm where required</p> <p>4.9. Finished joint is checked against quality requirements</p>
5. Construct sub-assemblies	<p>5.1. Components, materials, including adhesives, trims and accessories, and tools are laid out in accordance with the assembly plan</p> <p>5.2. Components are checked against specification prior to assembly and out of specification items are rejected</p> <p>5.3. Sub-assemblies are assembled using appropriate tools, jigs and fixtures and checked against specification for accuracy, fit, twist and distortion</p> <p>5.4. Sub-assembly quality is checked against plans at identified checkpoints</p>
6. Assemble custom furniture	<p>6.1. Components, sub-assemblies and materials, including adhesives, trims and accessories, and tools are laid out in accordance with the assembly plan</p> <p>6.2. Components and sub-assemblies are checked against specification prior to assembly and out of specification items are rejected</p> <p>6.3. Components are assembled, fitted using appropriate tools, jigs and fixtures and checked against specification for accuracy, fit, twist and distortion</p> <p>6.4. Hardware and decorative accessories are applied to</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>specification</p> <p>6.5. Product is prepared for final finish including the removal of bruises, scratches, dents and marks</p> <p>6.6. Product quality is checked against plans at identified checkpoints</p>
7. Finish furniture surface	<p>7.1. Using samples of the type of material surface and specified finish, various finishing options are evaluated and the preferred option is selected</p> <p>7.2. Sample of material is tested with selected finishing technique to ensure appropriateness</p> <p>7.3. Furniture surface is prepared in accordance with the finishing specification</p> <p>7.4. Imperfections, pores or nail or screw holes on the surface are rectified</p> <p>7.5. Finishing processes and materials are applied in accordance with the agreed specifications</p> <p>7.6. Surface is polished or buffed depending on the shine required</p> <p>7.7. Work is checked against required quality standards</p> <p>7.8. Any non-conformity with the required quality standards is rectified</p>
8. Complete housekeeping	<p>8.1. Unused materials are stored or recycled as required</p> <p>8.2. Tools and equipment are cleaned and stored appropriately</p> <p>8.3. Faulty or defective equipment is tagged and reported in accordance with workplace practices</p> <p>8.4. Work area is cleaned and rubbish disposed of appropriately</p> <p>8.5. Workplace documentation and/or reports are completed, including time log for operations for costing and business improvement activities</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate custom furniture construction problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- create innovative designs which satisfy the agreed parameters and consider but are not limited by other historical or contemporary influences
- adapt traditional and innovative construction techniques to address unique construction circumstances
- identify new enterprise opportunities when developing product proposals
- adopt a proactive relationship with the clients and other furniture makers
- develop industry networks
- plan and organise activities including the preparation and layout of the worksite and the obtaining of tools and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for planned tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of furniture construction techniques and materials
- explore and develop solutions beyond the currently recognised boundaries
- involve others in the learning process
- use the workplace technology related to the selection, preparation, operation and maintenance of hand and power tools, including calculators and measuring devices
- apply knowledge of timber technology to optimise the selection and use of timber varieties and related construction materials.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to

REQUIRED SKILLS AND KNOWLEDGE

- moisture suppressants and barrier systems
- organisational, workshop and site standards, requirements, policies and procedures for the construction of custom furniture
- types of tools and equipment used in construction and procedures for their safe use, operation and maintenance
- work flow techniques appropriate for the management of the construction work/project
- the presentation and interpretation of plan representation of a furniture design
- techniques for timber bending, forming and shaping
- techniques for the preparation of drawings/set-outs/rods and geometrical concepts
- types, characteristics, uses and limitations of materials
- techniques for the manufacture and application of veneers
- techniques for assembly, fixing and finishing of custom furniture components
- types, characteristics, uses, limitations and safety requirements of adhesives, fasteners and hardware used in custom furniture assembly
- matching requirements of adhesives and fasteners to timbers/materials used
- finishing techniques
- characteristics, properties and selection criteria of finishing materials
- finishing characteristics and properties of timber being used
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for preparing and presenting design information
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Complete all aspects of the construction and finishing of two furniture items requiring advanced construction techniques
- The furniture item must satisfy high quality custom made furniture standards and expectations in terms of innovation, complexity, tolerance and fit of components and quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - an agreed unique and innovative furniture construction requirement/project for one item
 - access to appropriate materials, tools and equipment

EVIDENCE GUIDE	
	<p>relevant to the planning and application of construction and finishing techniques</p> <ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other relevant and contributory units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling, including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> may include but not be limited to workplace procedures relating to the use and operation of tools and equipment, production planning figures, workplace instructions including job sheets, set-outs, plans, specifications, drawings and designs, workplace procedures relating to reporting and communications, and manufacturer instructions for the use of equipment and materials
Shaping, bending and forming techniques	<ul style="list-style-type: none"> may include but not be limited to steam/heat bending, curving, pressure bending and shaping by hand or static machine
Shaped components	<ul style="list-style-type: none"> include timber shaped by hand or static machine tools

RANGE STATEMENT	
Cutting and shaping tools and equipment	<ul style="list-style-type: none"> may include but not be limited to measuring tapes for rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, pneumatic tools, clamps, screwdrivers, pincers, rasps, surface planers, panel planers, belt sanders, horizontal borers, vertical drill presses, table saws, dove-tailers, pedestal grinders, wood turning lathes, veneer guillotines and presses
Materials	<ul style="list-style-type: none"> may include but not be limited to timber, glass, metal, manufactured board, furniture hardware, adhesives, screws, nails, dowels, decorative finishes and finishing material
Veneering tools and equipment	<ul style="list-style-type: none"> may include but not be limited to knives, chisels, measuring tapes or rules, mallets, squares, levels, planes, bandsaws, power saws, pneumatic tools, vacuum bags and presses, clamps, moulds, jigs and fixture, rollers, laminate trimmers, cutters and hand routers, sand paper, wire wool and sanding block
Veneered components	<ul style="list-style-type: none"> refers to the thin slices of wood, usually thinner than 3 mm (1/8"), which is usually glued onto a substrate
Veneer materials	<ul style="list-style-type: none"> may include but not be limited to timber, manufactured board, laminates, timber strips, adhesives, cleaning materials and tapes
Joints for custom furniture	<ul style="list-style-type: none"> may include but not be limited to variations of dowel, mortise and tenon, dovetail, lap joint, biscuit joint, finger joint, housing joint, mitre or bridle joints
Jointing tools and equipment	<ul style="list-style-type: none"> may include but not be limited to chisels, mallets, mortise gauges, vernier callipers, vices, dovetail saws, tenon saws, coping saws, planes, files, hand drills, power drills, dowel jigs, power routers, jigs and fixtures may also include portable biscuit machines and power saws
Jointing materials	<ul style="list-style-type: none"> may include but not be limited to timber (both indigenous and overseas), adhesives and fasteners
Sub-assembly	<ul style="list-style-type: none"> are part-constructions of the main assembly needed to allow for gluing and clamping of internal and intricate parts of the furniture item
Assembly materials	<ul style="list-style-type: none"> may include but not be limited to timber (both indigenous and overseas), adhesives, screws, dowels, furniture hardware, glass and decorative finishes
Assembly tools and equipment	<ul style="list-style-type: none"> may include but not be limited to measuring tapes or rules, hammers, mallets, squares, clamps and presses
Furniture surface preparation	<ul style="list-style-type: none"> may include but not be limited to sanding by hand or power sander, scraping, planing or other smoothing technique

RANGE STATEMENT	
	<ul style="list-style-type: none"> is to take account of the fact that the wood's colour may be changed by staining, bleaching, painting, ammonia fuming and/or a number of other techniques
Surface may be filled	<ul style="list-style-type: none"> using, wood plugs or other fillers
Finishing processes and materials	<ul style="list-style-type: none"> may include but not be limited to waxing, shellacking, nitrocellulose lacquering, conversion lacquering, linseed oiling, tung oiling, alkyd varnishing, polyurethane varnishing, water-based polyurethane and/or oil-varnish mixes, depending on the finish required, the furniture's use and the material type used

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFFDT5007A Design a batch or limited production item of furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcome required to identify the qualities of a batched or limited production furniture item and the design of a contemporary furniture product for a client or retail outlet that requires batch or limited production methodology.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furniture maker operations. The competency applies to a custom furniture business and/or a design support environment and involves application of skills and knowledge at a Diploma level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the design process. Planning and organising and problem solving skills are required to apply design processes and initiative and enterprise are required to develop design ideas. Self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and analyse qualities and properties of batched or limited production furniture items	1.1. Applicable <i>legislative, OHS</i> and <i>enterprise requirements</i> relevant to the design of batch or limited production items of furniture are verified and complied with 1.2. Details of the qualities and properties of <i>batch produced furniture</i> making methods are identified 1.3. Features of limited production methods are identified 1.4. Resource and equipment implications for batch and limited production methods are assessed
2. Research product needs	2.1. All external parameters affecting the design of the contemporary furniture product are obtained from the client or from information sources 2.2. Client or market needs for contemporary product are obtained and recorded 2.3. <i>Inspirational information</i> is collected from relevant sources 2.4. <i>Visual needs of the product</i> are identified and documented 2.5. <i>Ethical considerations</i> are obtained, reviewed and documented 2.6. Product needs are prioritized and recorded in accordance with enterprise practice
3. Prepare the design brief	3.1. Product needs and external parameters and factors are reviewed and clarified with the client or retail customers. 3.2. Report on product needs is produced including design opportunities 3.3. Feedback from the client or customers is gained and recorded 3.4. Details of changes are negotiated with client or customers and recorded 3.5. Outcomes of design process are clarified and agreed to with client 3.6. Design brief is prepared and documented including budget, time lines, production needs and methods
4. Generated ideas in response to design brief	4.1. All relevant information on product and client needs are analysed and integrated into generation of ideas using <i>lateral thinking methods</i> 4.2. Ideas are visually presented 4.3. Ideas are matured through review and reworking 4.4. New ideas are generated from initial ideas

ELEMENT	PERFORMANCE CRITERIA
	4.5. Final ideas are visually presented
5. Evaluate and develop design proposals	5.1. Each design idea is evaluated against design brief and requirements for batch or limited production manufacture 5.2. Design proposals are scored against weighted assessment criteria and results recorded 5.3. Feasible high scoring design proposals are selected for further development 5.4. Design proposals are completed in response to evaluation feedback
6. Present product proposals to client	6.1. Product proposals are prepared for presentation to client 6.2. Presentation arrangements are made, checked and confirmed 6.3. Design proposals are presented to the client 6.4. Client feedback is gained, analysed and confirmed 6.5. Design proposals are completed with consideration to client feedback
7. Produce final product proposal information ready for making	7.1. Construction details are finalised and documented 7.2. Visual aspects of product proposal are documented 7.3. Part details are documented 7.4. Manufacturing methods are documented 7.5. Details are recorded in accordance with enterprise practice

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to the needs for a furnishing product
- communicate ideas, information and advice to client to enable confirmation of design requirements, plans and specifications
- prepare design proposals
- listen to client or customer needs
- work with others and in a team understand product needs and produce design proposals
- reviewing information provided and creatively generate proposals for a furnishing product
- apply research, analytical and mathematical skills to the identification and selection of materials and the selection of appropriate production and construction techniques for the product
- plan activities covering the choice of design method, the preparation and layout of the product proposals
- use mathematical ideas and techniques to correctly complete technical details of the proposed designs
- create innovative designs which satisfy the agreed parameters and consider but are not limited by other historical or contemporary influences
- recognise and respond to circumstances outside instructions or personal competence
- adopt a proactive relationship with the client
- identify new enterprise opportunities when developing product proposals
- clarify and confirm work instructions
- plan design work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal design work goals
- satisfy the competency requirements for the job
- maintain current knowledge of batch and limited production methods
- maintain current knowledge of design methods
- seek learning opportunities
- use the workplace technology related to the production of technical information for production details
- use of workplace electronic media to communicate with client, suppliers and subcontractors.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the design of furniture maker product
- ideas generation and conceptual development techniques
- historical furniture styles and movements

REQUIRED SKILLS AND KNOWLEDGE

- contemporary furniture styles and movements
- design methodology
- current ethical issues in society affecting furniture makers
- ergonomic and anthropometric standards
- environmental issues in making a furnishing product
- visual aesthetics of furnishing products
- current market segment products
- batch production techniques for product types
- production methodologies of furniture makers
- physical needs of product type
- materials used to produce furnishing products
- materials and finishes
- making techniques for product types
- costing techniques including overhead components
- options and technologies for presenting visual information
- established communication channels and protocols
- problem identification and resolution methods
- document control methods.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for designing and production of a contemporary furniture product.
- Identify the limitations and opportunities of batch and limited production design work for contemporary furniture products
- Develop and present final proposals for batch and limited production furniture items to meet design brief
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - a realistic product need
 - specific information covering client needs,
 - batch production capabilities
 - details of the product requirements and options

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to

EVIDENCE GUIDE	
	<p>ensure its correct interpretation and application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with other related units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect enterprise operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, enterprise safety policies and procedures.
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, enterprise, guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Batch produced furniture	<ul style="list-style-type: none"> may include but not limited to contemporary furniture products that are made in multiples but are not mass produced. Characteristics include details and fittings being produced with jigs and fixtures to allow for further batches to be made
Inspirational information	<ul style="list-style-type: none"> may include but not be limited to catalogues, brochures, magazines, existing products, reference books and other existing enterprise design information may also include but not limited to transferable technological ideas or concepts, natural or man-made structures and objects
Visual needs of the product	<ul style="list-style-type: none"> may include but not be limited to point, line, plane, volume, shape, form, tone, colour, surface, texture, scale, size, vertex, edge, face, position, direction, space, balance, movement, proportion, rhythm, repetition, pattern, relief, mass and movement

RANGE STATEMENT	
Ethical considerations	<ul style="list-style-type: none"> may include but not be limited to issues relating to social justice, environmental sustainability, biodiversity, cultural heritage and social responsibility of furniture makers
Lateral thinking methods	<ul style="list-style-type: none"> may include but not be limited to suspending belief, looks for gaps of need, alternatives, daydreaming, creative leaping, filaments, brainstorming, six thinking hats and asking questions of norms and beliefs outcomes of lateral thinking has no range by definition as it cannot be predefined and not judged in the process of generation

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT5008A Design a furniture product using high volume technology services (HVTS) in production

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcome required to identify qualities of high volume technology production and design a furniture product which utilises this technology to produce details and components for the design.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furniture maker operations. The competency applies to a custom furniture business and/or design support environment and involves application of skills and knowledge at a Diploma level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the design process. Planning and organising and problem solving skills are required to apply design processes and initiative and enterprise are required to develop design ideas. Self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Identify and analyse qualities and properties of HVTS</p>	<p>1.1. Applicable legislative, OHS and enterprise requirements relevant to the design of furniture product using high volume technology production services are verified and complied with</p> <p>1.2. Details of types of high volume technology production methods are identified and documented</p> <p>1.3. Details of qualities and properties of high volume technology services are analysed and reviewed for suitability for furniture products</p> <p>1.4. Features of high volume technology production methods are identified</p> <p>1.5. Resource and equipment implications for high volume technology production methods are assessed</p>
<p>2. Research product needs</p>	<p>2.1. All external parameters affecting the design of the furniture product are obtained from the client or from information sources</p> <p>2.2. Client needs for product are obtained and recorded</p> <p>2.3. Inspirational information is collected from relevant sources</p> <p>2.4. Visual needs of the product are identified and documented</p> <p>2.5. Ethical considerations are obtained, reviewed and documented</p> <p>2.6. Product needs are prioritized and recorded in accordance with enterprise practice</p>
<p>3. Prepare the design brief</p>	<p>3.1. Product needs and external parameters and factors are reviewed and clarified with the client</p> <p>3.2. Report on product needs is produced including HVTS opportunities</p> <p>3.3. Feedback from the client is recorded</p> <p>3.4. Details of changes are negotiated with client and recorded</p> <p>3.5. Outcomes of design process are clarified and agreed to with client</p> <p>3.6. Design brief is prepared and documented including budget, time lines, production needs and methods</p>
<p>4. Generate ideas in response to design brief</p>	<p>4.1. All relevant information on product need and client needs are analysed and absorbed.</p> <p>4.2. Ideas are generated from information provided using lateral thinking methods</p> <p>4.3. Ideas are visually presented</p>

ELEMENT	PERFORMANCE CRITERIA
	4.4. Ideas are matured through review and reworking 4.5. New ideas are generated from initial ideas 4.6. Final ideas are visually presented
5. Evaluate and develop design proposals	5.1. Each design idea is evaluated against design brief and requirements for HVTS production 5.2. Design proposals are scored against weighted assessment criteria and results recorded 5.3. Feasible high scoring design proposals are selected for further development 5.4. Design proposals are completed in response to evaluation feedback
6. Present product proposals to client	6.1. Product proposals are prepared for presentation to client 6.2. Presentation arrangements are made, checked and confirmed 6.3. Design proposals are presented to the client 6.4. Client feedback is gained, analysed and confirmed 6.5. Design proposals are completed with consideration to client feedback
7. Produce final product proposal information ready for making	7.1. Construction details are finalised and documented 7.2. Visual aspects of product proposal are documented 7.3. Part details are documented 7.4. Manufacturing methods are documented 7.5. Details are recorded in accordance with enterprise practice

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge for this unit.

Required skills

- collect, organise and understand information related to the needs for a furnishing product
- communicate ideas, information and advice to client to enable confirmation of design requirements, plans and specifications
- prepare and present information visually using contemporary techniques and technologies
- prepare design proposals
- listen to clients needs
- work with others and in a team to understand product needs and produce design proposals
- reviewing information provided and creatively generate proposals for a furnishing product
- apply research, analytical and mathematical skills to the identification and selection of materials and the selection of appropriate production and construction techniques for the product
- create innovative designs which satisfy the agreed parameters and consider but are not limited by other historical or contemporary influences
- recognise and respond to circumstances outside instructions or personal competence
- adopt a proactive relationship with the client
- identify new enterprise opportunities when developing product proposals
- plan activities covering the choice of design method, the preparation and layout of the product proposals
- use mathematical ideas and techniques to correctly complete technical details of the proposed designs
- clarify and confirm work instructions
- plan design work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal design work goals
- satisfy the competency requirements for the job
- maintain current knowledge of HVTS
- maintain current knowledge of design methods
- seek learning opportunities
- use the workplace technology related to the production of technical information for production details
- use of workplace electronic media to communicate with client, suppliers and subcontractors.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the design of furniture maker product
- ideas generation and conceptual development techniques

REQUIRED SKILLS AND KNOWLEDGE

- historical furniture styles and movements
- contemporary furniture styles and movements
- design methodology
- current ethical issues in society affecting furniture-makers
- ergonomic and anthropometric standards
- environmental issues in making a furnishing product
- visual aesthetics of furnishing products
- current market segment products
- high volume technology production methods
- production methodologies of furniture makers
- physical needs of product type
- materials used to produce furnishing products
- materials and finishes
- making techniques for product types
- costing techniques including overhead components
- options and technologies for presenting visual information
- established communication channels and protocols
- problem identification and resolution methods
- document control methods.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for designing and production of a furniture product
- Identify the features of HVTS and required specifications when incorporating in the design of a furniture product
- Document and communicate three product proposals including: customer requirements, aesthetics, materials and construction, costing calculations for products, materials and finishes, and HVTS components
- Document product needs analysis
- Evaluate product proposals
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - a realistic product need
 - specific information product type needs,
 - specifications and client instructions
 - details of the product requirements and options

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with other related units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect enterprise operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, enterprise safety policies and procedures
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, enterprise, guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
High volume technology services	<ul style="list-style-type: none"> may include but not be limited to laser cutting, machine point to point cutting, water jet cutting, plasma cutting, SLA and computer numeric controlled machining
Inspirational information	<ul style="list-style-type: none"> may include but not be limited to catalogues, brochures, magazines, existing products, reference books and other existing enterprise design information may also include but not be limited to transferable technological ideas or concepts, natural or man-made structures and objects
Visual needs of the product	<ul style="list-style-type: none"> may include but not be limited to point, line, plane, volume, shape, form, tone, colour, surface, texture, scale, size, vertex, edge, face, position, direction, space, balance, movement, proportion, rhythm, repetition, pattern, relief, mass and movement
Ethical considerations	<ul style="list-style-type: none"> may include but not be limited to issues relating to social justice, environmental sustainability, biodiversity, cultural heritage and social responsibility of furniture makers

RANGE STATEMENT	
Lateral thinking methods	<ul style="list-style-type: none"> • may include but not be limited to suspending belief, looks for gaps of need, alternatives, daydreaming, creative leaping, filaments, brainstorming, six thinking hats and asking questions of norms and beliefs • outcomes of lateral thinking has no range by definition as it cannot be predefined and not judged in the process of generation

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT5009A Design a one-off item of furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcome required to identify the qualities of a one-off designed furniture item and then design a furniture product for a client or for exhibition based on those qualities.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furniture maker operations. The competency applies to a custom furniture business and/or design support environment and involves application of skills and knowledge at a Diploma level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the design process. Planning and organising and problem solving skills are required to apply design processes and initiative and enterprise are required to develop design ideas. Self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and analyse qualities and properties of one-off made furniture items	1.1. Applicable legislative, OHS and organisational requirements relevant to the design of one-off furniture items are verified and complied with 1.2. Details of the qualities and properties of one-off made furniture methods are identified, reviewed and documented 1.3. Details are recorded in accordance with enterprise practice
2. Research product needs	2.1. All external parameters affecting the design of the furniture product are obtained from the client or from information sources 2.2. Client needs for product are obtained and recorded 2.3. Inspirational information is collected from relevant sources 2.4. Visual needs of the product are identified and documented 2.5. Ethical considerations are obtained, reviewed and documented 2.6. Produce needs are prioritised and recorded in accordance with enterprise practice
3. Prepare design brief	3.1. Product needs and external parameters and factors are reviewed and clarified with the client 3.2. Report on product needs is produced including design opportunities 3.3. Feedback from the client is recorded 3.4. Details of changes are negotiated with client and recorded 3.5. Outcomes of design process are clarified and agreed to with client 3.6. Design brief is prepared and documented including budget, time lines, production needs and methods
4. Generate ideas in response to design brief	4.1. All relevant information on produce need and client needs are analysed and absorbed 4.2. Ideas are generated from information provided using lateral thinking methods 4.3. Ideas are visually presented 4.4. Ideas are matured through review and reworking 4.5. New ideas are generated from initial ideas 4.6. Final ideas are visually presented
5. Evaluate and develop design proposals	5.1. Each design idea is evaluated against prioritised product and client needs and recommendation recorded

ELEMENT	PERFORMANCE CRITERIA
	<p>5.2. Design proposals are scored against weighted assessment criteria and results recorded</p> <p>5.3. Feasible high scoring design proposals are selected for further development</p> <p>5.4. Design proposals are developed in response to evaluation feedback</p>
6. Present product proposals to client	<p>6.1. Product proposals are prepared for presentation to client</p> <p>6.2. Presentation arrangements are made, checked and confirmed</p> <p>6.3. Design proposals are presented to the client</p> <p>6.4. Client feedback is gained, analysed and confirmed</p> <p>6.5. Design proposals are completed with consideration to client feedback</p>
7. Produce final product proposal information ready for making	<p>7.1. Construction details are finalised and documented</p> <p>7.2. Visual aspects of product proposal are documented</p> <p>7.3. Part details are documented</p> <p>7.4. Manufacturing methods are documented</p> <p>7.5. Details are recorded in accordance with enterprise practice</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to the needs for a furnishing product
- communicate ideas, information and advice to client to enable confirmation of design requirements, plans and specifications
- prepare design proposals
- listen to clients needs
- work with others and in a team understand product needs and produce design proposals
- reviewing information provided and creatively generate proposals for a furnishing product
- apply research, analytical and mathematical skills to the identification and selection of materials and the selection of the appropriate production and construction techniques for the product
- create innovative designs which satisfy the agreed parameters and consider but are not limited by other historical or contemporary influences
- recognise and respond to circumstances outside instructions or personal competence
- adopt a proactive relationship with the client
- identify new enterprise opportunities when developing product proposals
- plan activities covering the choice of design method, the preparation and layout of the product proposals
- use mathematical ideas and techniques to correctly complete technical details of the proposed designs
- clarify and confirm work instructions
- plan design work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal design work goals
- satisfy the competency requirements for the job
- maintain current knowledge of making methods
- maintain current knowledge of design methods
- seek learning opportunities
- use the workplace technology related to the production of technical information for production details
- use of workplace electronic media to communicate with client, suppliers and subcontractors.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the design of furniture maker product
- ideas generation and conceptual development techniques
- historical furniture styles and movements

REQUIRED SKILLS AND KNOWLEDGE

- contemporary furniture styles and movements
- design methodology
- current ethical issues in society affecting furniture makers
- ergonomic and anthropometric standards
- environmental issues in making a furnishing product
- visual aesthetics of furnishing products
- current market segment products
- production methodologies of furniture makers
- physical needs of product type
- materials used to produce furnishing products
- materials and finishes
- making techniques for product types
- costing techniques, including overhead components
- options and technologies for presenting visual information
- established communication channels and protocols
- problem identification and resolution methods
- document control methods.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for designing and production of a furniture product.
- Identify the limitations and opportunities of one-off design for furniture product
- Produce and communicate three product proposals, including: customer requirements, aesthetics, materials and construction, costing calculations for products, materials and finishes
- Document product needs analysis
- Document visual references, physical constraints
- Document evaluation of initial product proposals
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - a realistic product need
 - specific information covering client needs,
 - manufacturing capabilities
 - details of the product requirements and options

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning

EVIDENCE GUIDE

	<p>knowledge</p> <ul style="list-style-type: none">• Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with other related units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect enterprise operation requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, enterprise safety policies and procedures
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, enterprise, guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
One-off made furniture	<ul style="list-style-type: none"> may include but not limited to furniture products that are made individually and are not mass produced. Characteristics include custom made details and fittings in the construction of the product
Inspirational information	<ul style="list-style-type: none"> may include but not be limited to catalogues, brochures, magazines, existing products, reference books and other existing enterprise design information may also include but not limited to transferable technological ideas or concepts, natural or man-made structures and objects
Visual needs of the product	<ul style="list-style-type: none"> may include but not be limited to point, line, plane, volume, shape, form, tone, colour, surface, texture, scale, size, vertex, edge, face, position, direction, space, balance, movement, proportion, rhythm, repetition, pattern, relief, mass and movement.
Ethical considerations	<ul style="list-style-type: none"> may include but not be limited to issues relating to social justice, environmental sustainability, biodiversity, cultural

RANGE STATEMENT	
	heritage and social responsibility of furniture makers
Lateral thinking methods	<ul style="list-style-type: none"> • may include but not be limited to suspending belief, looks for gaps of need, alternatives, daydreaming, creative leaping, filaments, brainstorming, six thinking hats and asking questions of norms and beliefs • outcomes of lateral thinking has no range by definition as it can not be predefined and not judged in the process of generation

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT5010A Research and recommend alternative manufacturing processes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to research and recommend alternative manufacturing processes for various design solutions in accordance with the integral elements and principles of design.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The research and recommendation of alternative manufacturing processes applies to an industry workplace or design studio environment and involves application of skills and knowledge at a para-professional level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit includes employability skills in planning and organising and problem solving and initiative and enterprise in order to determine suitable alternative manufacturing processes for specific design requirements. Communication skills are used to interpret and record information and technology skills are required to determine capacity of different manufacturing processes.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency	Performance criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for alternative manufacturing research	1.1. Applicable <i>OHS, legislative</i> and <i>organisational requirements</i> relevant to researching and recommending alternative manufacturing processes are verified and complied with 1.2. <i>Design brief</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i> 1.3. <i>Communication</i> with others is established and maintained 1.4. <i>Client</i> requirements and desires are reviewed, confirmed and clarified
2. Research alternative manufacturing processes	2.1. <i>Aesthetic</i> requirements of <i>alternative manufacturing processes</i> are assessed 2.2. New manufacturing processes are researched and reported 2.3. Costs of alternative manufacturing processes are assessed and compared 2.4. <i>Environmental impact</i> of alternative manufacturing processes are assessed 2.5. <i>Hazards</i> associated with alternative manufacturing processes are researched 2.6. Quality of alternative manufacturing processes are assessed and reported
3. Recommend alternative manufacturing processes	3.1. Research information is <i>critically analysed</i> in the context of the design brief requirements 3.2. Alternative manufacturing processes and their <i>elements of design</i> are promoted, research explained and evaluated for the client 3.3. Alternative manufacturing processes and their <i>principles of design</i> are promoted, research explained and evaluated for the client 3.4. Presentation of research information is made, highlighting the findings and rationale for the alternative manufacturing processes chosen

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- accurately recording and maintaining information relating to the furniture making and design functions
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use
- recognise and respond to circumstances outside instructions or personal competence
- efficiently and safely contribute to innovative design process
- plan and organise activities, including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- learning of thinking, problem solving and conceptual techniques
- maintain current knowledge of tools and materials
- maintain current knowledge of furniture making and designing techniques
- seek learning opportunities
- use the workplace technology related to the use of tools, including calculators, measuring and recording devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to researching and recommending alternative manufacturing processes
- organisational and site standards, requirements, policies and procedures for researching and recommending alternative manufacturing processes
- environmental protection requirements
- established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- problem identification and resolution
- elements and principles of design
- aesthetic values
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- research techniques
- alternative manufacturing processes
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively research and recommend at least three alternative manufacturing processes to assist with informing the design process and arrive at a solution which meets client requirements
- Effectively apply design elements and principles to the research and recommendation of alternative manufacturing processes
- Effectively research and recommend alternative manufacturing processes in accordance with the concepts and design brief
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for researching and recommending alternative manufacturing processes
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to researching and recommending alternative manufacturing processes
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures • requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation • requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> • may include but not be limited to the aims, objectives, milestones for the design project, the point of reference for everyone, elements and principles of design and may include organisational or personal profiles, aims, target audience, budget, timeline, consultation requirements, colour requirements, image requirements and function

RANGE STATEMENT	
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Clients	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Aesthetics	<ul style="list-style-type: none"> are to include the consideration of appeal to a large number of people; products are pleasing to the eye of many who view it
Alternative manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the various methods by which the product can be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Environmental impact	<ul style="list-style-type: none"> is to include but not be limited to how the use of alternative manufacturing processes effects the environment and how continued use will affect the surrounding environment, energy consumption, greenhouse gases created, waste levels and resource utilisation. Similarly what impact will be felt by reducing or stopping use of the alternative manufacturing processes
Hazards	<ul style="list-style-type: none"> may include but not be limited to high speed machinery, open cutting blades, threat from electric shock, materials handling incidents, toxic substances and gases
Critical analysis	<ul style="list-style-type: none"> may include but not be limited to comparing, contrasting, reflecting, critiquing, considering merit, discussion and debate
Elements of design	<ul style="list-style-type: none"> may include but not be limited to line, shape, form (geometric or organic), texture, colour, and function
Principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, dominant, sub dominant or subordinate relationship,

RANGE STATEMENT	
	emphasis, proximity, alignment, space, anthropometry, ergonomics, arrangement, workload, materials handling capacity, skills, control, equipment capabilities, aesthetic relations, tension and development methods

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT5011A Research and recommend machine technology

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to research and recommend machine technology for various design solutions in accordance with the integral elements and principles of design.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The research and recommendation of machine technology applies to an industry workplace or design studio environment and involves application of skills and knowledge at a para-professional level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for machine technology research	<p>1.1. Applicable OHS, legislative and organisational requirements relevant to researching and recommending machine technology are verified and complied with</p> <p>1.2. Design brief is reviewed, confirmed and clarified with appropriate personnel</p> <p>1.3. Communication with others is established and maintained in accordance with OHS requirements</p> <p>1.4. Client requirements and desires are reviewed, confirmed and clarified</p>
2. Research machine technology	<p>2.1. Aesthetic requirements of the machine technology are assessed</p> <p>2.2. New machine technologies are researched and reported</p> <p>2.3. Manufacturing processes and available expertise for the desired material are assessed</p> <p>2.4. Capabilities and scope of machine technology is compared and evaluated</p> <p>2.5. Cost of machine technology is assessed and compared</p> <p>2.6. Environmental impact of machine technology are assessed</p> <p>2.7. Longevity and restorability of machine technology are researched</p> <p>2.8. Hazards associated with the use and application of machine technology are researched</p> <p>2.9. Quality of machine technology are assessed and reported</p>
3. Recommend machine technology	<p>3.1. Research information is critically analysed in the context of the design brief requirements</p> <p>3.2. Machine technology and the relationship to elements of design are promoted, research explained and evaluated for the client</p> <p>3.3. Machine technology and the relationship to principles of design are promoted, research explained and evaluated for the client</p> <p>3.4. Presentation of research information is made, highlighting the findings and rationale for the machine technology chosen</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- accurately record and maintain information relating to the furniture making and design functions
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use
- recognise and respond to circumstances outside instructions or personal competence
- efficiently and safely contribute to innovative design process
- plan and organise activities, including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- learning of thinking, problem solving and conceptual techniques
- maintain current knowledge of tools and materials
- maintain current knowledge of furniture making and designing techniques
- seek learning opportunities
- use the workplace technology related to the use of tools including calculators, measuring and recording devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to researching and recommending machine technology
- organisational and site standards, requirements, policies and procedures for researching and recommending machine technology
- environmental protection requirements
- established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- problem identification and resolution
- elements and principles of design
- aesthetic values
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- research techniques
- machine technology types and manufacturing processes
- computer numerically controlled equipment
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively research and recommend machine technology to assist with informing the design process and arrive at a solution which meets client requirements
- Effectively apply design elements and principles to the research and recommendation of machine technology
- Effectively research and recommend machine technology in accordance with the concepts and design brief
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for researching and recommending machine technology
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to researching and recommending machine technology
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions

EVIDENCE GUIDE	
	<p>(real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures • requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation • requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> • may include but not be limited to the aims, objectives, milestones for the design project, the point of reference for everyone, elements and principles of design and may include organisational or personal profiles, aims, target audience, budget, timeline, consultation requirements, colour requirements, image requirements and function

RANGE STATEMENT	
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Clients	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Aesthetics	<ul style="list-style-type: none"> are to include the consideration of appeal to a large number of people; products are pleasing to the eye of many who view it
Machine technology	<ul style="list-style-type: none"> may include but not be limited to traditional or contemporary finishing equipment, assembly equipment, static machinery, portable power tools and computer numerically controlled equipment may also include procedures for lock out protecting operators and co-workers from accidental injury by isolating the machine from the power source
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Environmental impact	<ul style="list-style-type: none"> may include but not be limited to how the use of machine technology effects the environment and how continued use will affect the surrounding environment, energy consumption, greenhouse gases created, waste levels and resource utilisation. Similarly what impact will be felt by reducing or stopping use of machine technology
Longevity and restorability	<ul style="list-style-type: none"> is to include an analysis of how long the machinery will remain operational with minimum downtime and how readily the machine can be repaired or replaced
Hazards	<ul style="list-style-type: none"> may include but not be limited to saw and cutter blades, heavy equipment, moving parts, burns, electric shock or electric shock

RANGE STATEMENT	
Critical analysis	<ul style="list-style-type: none"> may include but not be limited to comparing, contrasting, reflecting, critiquing, considering merit, discussion and debate
Elements of design	<ul style="list-style-type: none"> may include but not be limited to line, shape, form (geometric or organic), texture, colour, and function
Principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, dominant, sub dominant or subordinate relationship, emphasis, proximity, alignment, space, anthropometry, ergonomics, arrangement, workload, materials handling capacity, skills, control, equipment capabilities, aesthetic relations, tension and development methods

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT5013A Evaluate furniture design proposals and concepts

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to evaluate design proposals and concepts with reference to set criteria established from original design briefs and enterprise objectives.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furniture maker operations. The competency applies to custom furniture business or design support environment and involves application of skills and knowledge at a post trade level. These skills and knowledge are to be used within the scope of the person's job and authority.</p> <p>The evaluation involves assessment of own designs and designs generated by others.</p> <p>This unit requires employability skills in planning and organising and problem solving to assess designs against criteria. Communication skills are used to research and document industry information and self management skills are used to analyse findings. Learning skills are required in order reflect on and assess own work against set criteria.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish evaluation criteria for design	<p>1.1. Applicable legislative, OHS and enterprise requirements relevant to the evaluation of design proposals and concepts are verified and complied with</p> <p>1.2. Original design brief is analysed to establish criteria to use in assessing design proposals and concepts</p> <p>1.3. Enterprise business objectives are reviewed to identify criteria to use in assessing designs</p> <p>1.4. Enterprise production capacity is identified and strengths and limitations incorporated into evaluation criteria</p> <p>1.5. Current industry design trends are researched and identified</p> <p>1.6. Workplace and industry standards in relation to design presentation are researched and identified</p> <p>1.7. Quality criteria that apply to design processes are researched and identified</p> <p>1.8. Criteria for assessment are identified and clarified with client and colleagues</p> <p>1.9. The weighting of each criteria for assessment is confirmed</p> <p>1.10. Details are recorded in accordance with enterprise practice</p>
2. Evaluate design	<p>2.1. Design is assessed to evaluate if it fits the intention of the design brief</p> <p>2.2. Form, function and style of the design are assessed and evaluated</p> <p>2.3. Environmental impact of the design is assessed and evaluated</p> <p>2.4. Cultural relevance of the design is analysed and evaluated</p> <p>2.5. Economic significance of the design is assessed and evaluated</p> <p>2.6. Design methodology is reviewed for adherence to the elements and principles of design</p> <p>2.7. Material choice appropriateness is analysed and evaluated</p> <p>2.8. Technical integrity of the design is assessed and evaluated</p> <p>2.9. The design is evaluated for consistency with current</p>

ELEMENT	PERFORMANCE CRITERIA
	industry trends and influences
3. Evaluate design concepts for construction and production suitability	<p>3.1. Details of enterprise and related construction constraints are assessed</p> <p>3.2. Details of enterprise and subcontractor production constraints are identified and reviewed</p> <p>3.3. Production ability of the design is analysed and evaluated</p> <p>3.4. Equipment selection is assessed and evaluated</p> <p>3.5. Manufacturing process, assembly and finishing techniques selected for the design are reviewed and evaluated</p> <p>3.6. Design is evaluated against construction and production constraints</p> <p>3.7. Changes to design are recommended and recorded in accordance with enterprise practice</p>
4. Determine and report on design suitability	<p>4.1. Design is evaluated against each criteria</p> <p>4.2. Weighted assessment is used to make comparisons and rank components of design</p> <p>4.3. Recommendations are made for improvements to design in order to further address criteria</p> <p>4.4. Design suitability in meeting criteria is determined and documented with recommendations for improvements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to design a furnishing products
- communicate ideas, information and advice to client to enable confirmation of design selection, plans and specifications
- prepare evaluation documentation
- work with others and in a team to evaluate design proposals
- work with clients to review designs
- apply listening and analysis techniques to anticipate production and construction problems and plan around them
- recognise and respond to circumstances outside instructions or personal competence
- adopt a proactive relationship with the clients to recognise issues and create alternatives
- plan activities covering the choice of evaluation method, the preparation and layout of the design information
- use mathematical ideas and techniques to correctly complete evaluation models
- clarify and confirm evaluation instructions
- plan evaluation within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of production methods
- maintain current knowledge of evaluation methods
- seek learning opportunities
- use the workplace technology related to the electronic communication with colleagues and clients as well as documenting and presenting information.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the design and construction of furnishing products
- design methodology
- furniture styles and movements
- visual aesthetics of furnishing products
- environmental and ethical issues in making a furnishing product
- materials used to produce furnishing products
- production methodologies of furniture makers
- assessment and evaluation techniques

REQUIRED SKILLS AND KNOWLEDGE

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| <ul style="list-style-type: none">• overhead components and costing techniques• contemporary techniques for collating and preparing visual information• established communication channels and protocols• problem identification and resolution• document control methods. |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for planning of evaluation of design proposals • Use of calculators, computer programs and other aids in the calculation of proposal rankings • Documentation of evaluation criteria clearly from original design brief • Assessment and documentation of evaluation of product proposals or concepts to move forward in the design process • Recommendations for design improvements for concepts, construction, production and final design presented • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • realistic product proposals • specific information covering materials, constructions and production methods • design brief and client instructions • details of the product requirements
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment

EVIDENCE GUIDE	
	<p>guidelines of the Furnishing Industry Training Package</p> <ul style="list-style-type: none"> • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with other related units of competency e.g. LMFFM4021A Research product needs, LMFFM4022A Create ideas in response to a brief and inspirational information
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect enterprise operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care, heritage, copyright, design right and patent law
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, enterprise safety policies and procedures
Enterprise requirements	<ul style="list-style-type: none"> may include but not be limited to legal, enterprise, guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones for the design project, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline and consultation requirements
Form	<ul style="list-style-type: none"> may include but not be limited to proportion and aesthetics
Function	<ul style="list-style-type: none"> may include but not be limited to ergonomics and practicality

RANGE STATEMENT	
Style	<ul style="list-style-type: none"> may include but not be limited to traditional, contemporary, modern, functional, commercial and artistic
Environmental impact	<ul style="list-style-type: none"> may include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will affect the area it has been sourced from, energy consumption in achieving the material, greenhouse gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source
Cultural relevance	<ul style="list-style-type: none"> may include but not be limited to demography, geography (local, regional, national), religious, climatic, societal, lifestyle, attitudinal, gratification, honour, living conditions, infrastructure, status and habitude
Economic significance	<ul style="list-style-type: none"> may include but not be limited to the potential financial return which the product could return, including sales volume and profitability
Design methodology	<ul style="list-style-type: none"> is to include but not be limited to the approach taken in addressing the design brief
Material	<ul style="list-style-type: none"> may include but not be limited to native timber (native and imported), man-made timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Technical integrity	<ul style="list-style-type: none"> is to include but not be limited to the intended structural qualities and construction methods of a designed product
Construction constraints	<ul style="list-style-type: none"> are the types of construction methods of joining parts and sub-assemblies together to make the structure and form of the product produced within the enterprise. These will depend on the skills and knowledge of the makers within the enterprise
Production constraints	<ul style="list-style-type: none"> are the methods of producing the individual parts and sub-assemblies of a product. These are dependent on the enterprise's machinery and skills and knowledge of their operators

RANGE STATEMENT	
Production ability	<ul style="list-style-type: none"> is to include but not be limited to how readily a design can be produced, the cost in producing it, the availability of equipment and skilled personnel
Equipment	<ul style="list-style-type: none"> may include but not be limited to hand tools, static machinery, portable power tools and computer numerically controlled equipment may also include procedures for lock out protecting operators and co-workers from accidental injury by isolating the machine from the power source
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Finishing	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils and plastic coatings
Weighted assessment	<ul style="list-style-type: none"> must be developed from original criteria to rank the proposals allowing for the weighting of each criteria

Unit Sector(s)

Unit sector	
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT6001A Assess economic impact of a design

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to assess the economic impact of a design, recording its marketability, volume potential and competition.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. Assessing the economic impact of a design applies to an industry workplace or design studio environment and involves application of skills and knowledge at a managerial level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit includes employability skills in planning and organising and problem solving to determine economic factors and impacts of a design. Communication skills are used to assess information, complete documentation and undertake calculations.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Research economic factors	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational requirements</i> relevant to assessing the economic impact of a design are verified and complied with</p> <p>1.2. <i>Design brief</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. <i>Communication</i> with others is established and maintained in accordance with OHS requirements</p> <p>1.4. <i>Market research fundamentals</i> are considered and analysed</p> <p>1.5. Potential <i>sales volume</i> of designed products are analysed and evaluated</p> <p>1.6. <i>Niche markets</i> are discovered and analysed for <i>cost benefit analysis</i></p>
2. Assess the economic impact of the design	<p>2.1. Production costs of a design are assessed and evaluated</p> <p>2.2. <i>Longitudinal studies</i> of a design are undertaken to explore potential success factors</p> <p>2.3. Scale of production is estimated taking into account market analysis</p> <p>2.4. <i>Profit margins</i> are analysed based on expected turnover, full costing of product, <i>price point</i> in the market and demand for the product</p> <p>2.5. Competition in the market place with similar design solutions or products in that market segment are analysed and strategies reviewed</p> <p>2.6. Availability of <i>resources</i> is assessed to ascertain what impact this will have on economic viability</p> <p>2.7. <i>Product lifecycle</i> analysis is evaluated for economic significance</p> <p>2.8. Long term <i>economic impact</i> on the business, staff and associated suppliers is analysed and strategised</p> <p>2.9. Intended <i>manufacturing processes</i> including <i>assembly</i> and <i>finishing</i> are assessed for their economic impact</p> <p>2.10. Final documentation outlining the full analysis of the designs economic impact is compiled and produced as a report</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- interpret costing and financial documentation
- access industry standards
- analyse business information
- read, interpret and follow information on work specifications, standard operating procedures and work instructions, and other reference material
- maintain accurate records
- communicate within the workplace
- sequence operations
- meet specifications
- clarify and check task-related information
- carry out work according to OHS practices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to assessing the economic impact of a design
- organisational and site standards, requirements, policies and procedures for assessing the economic impact of a design
- economic conditions and markets nationally and internationally
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products, sources and defects
- computer programs
- product assembly techniques and equipment capabilities
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively assess the economic impact of a design from inception through manufacture including marketing, sales volume and competition impact and recording of the impact study outcomes
- Effectively research, contrast and compare a range of economic factors upon a design
- Effectively produce a report on the economic impact study outcomes of a product
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for assessing the economic impact of a design
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to assessing the economic impact of a design
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures • requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation • requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> • may include but not be limited to the aims, objectives, milestones for the design project, the point of reference for everyone, elements and principles of design and may include organisational or personal profiles, aims, target audience, budget, timeline, consultation requirements, colour requirements, image requirements and function

RANGE STATEMENT	
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Market research fundamentals	<ul style="list-style-type: none"> is to include research undertaken to assess the size and nature of a market
Sales volume	<ul style="list-style-type: none"> is to include the amount sold within a specified time period, it is often expressed in monetary terms but can also be expressed in terms of the total amount of stock or products sold
Niche markets	<ul style="list-style-type: none"> is to include a very specific market segment within a broader segment of the market. It involves the provision of specialist products where relatively few or no competitors exist
Cost benefit analysis	<ul style="list-style-type: none"> is to include the assignment of monetary value to the costs and benefits (social, environmental and monetary) associated with a project for the purpose of selecting and evaluating project investment opportunities
Longitudinal studies	<ul style="list-style-type: none"> is to include a statistical study that produces data gathered over a period of time
Profit margins	<ul style="list-style-type: none"> is to include the amount by which income exceeds expenditure, it includes the sale price minus the cost of production, distribution and marketing
Price point	<ul style="list-style-type: none"> is to include the cost for sale placed on a product which caters to a market segment based on production costs, overheads and profit margins in relation to demand, supply and volume of sales
Resources	<ul style="list-style-type: none"> may include but not be limited to materials, personnel, equipment and systems
Product lifecycle	<ul style="list-style-type: none"> is the evolution of a product from its raw source, through its inception, development, manufacture, completion and time as a completed product until potential renewal
Economic impact	<ul style="list-style-type: none"> is to include the study of consumption, distribution

RANGE STATEMENT	
	and production on society in relation to a product
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Assembly methods	<ul style="list-style-type: none"> may include but not be limited to nailing, gluing, screwing, welding, pressing, sewing, bonding, jointing or connecting various materials
Finishing	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils and plastic coatings

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT6002A Design for mass production

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to design products for mass production, being mindful of equipment requirements and personnel capabilities while also considering cost effective opportunities and future planning considerations.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The design of products in mass production applies to an industry workplace or design studio environment and involves application of skills and knowledge at a managerial level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the design process. Planning and organising and problem solving skills are required to apply design processes and initiative and enterprise are required to develop design ideas. Self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for design	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational requirements</i> relevant to designing for limited production are verified and complied with</p> <p>1.2. <i>Design brief</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. <i>Client</i> requirements and desires are reviewed, confirmed and clarified</p> <p>1.4. <i>Communication</i> with others is established and maintained in accordance with OHS requirements</p> <p>1.5. Problems or underlying factors to be addressed by the design brief are verified</p> <p>1.6. <i>Elements of design</i> are diagnosed for the intended design brief</p> <p>1.7. <i>Principles of design</i> are diagnosed for the intended design brief</p> <p>1.8. Volumes of mass production runs are set, costed and relevance to the market evaluated</p>
2. Design for mass production	<p>2.1. <i>Concepts</i> for the proposed solution to the design brief are reviewed in accordance with mass production requirements</p> <p>2.2. Different <i>solutions</i> to satisfy the requirements of the design brief are presented and reviewed</p> <p>2.3. Sample <i>maquette</i> and <i>prototype</i> are reviewed in accordance with the concept sketches</p> <p>2.4. Final <i>working drawings</i> and <i>specifications</i> are reviewed and compiled in readiness for mass production</p> <p>2.5. Concept is designed for mass manufacture taking into account available equipment and resources</p> <p>2.6. <i>Equipment</i> capabilities are reviewed and assessed and design brief modified in accordance with available or <i>obtainable</i> equipment</p> <p>2.7. Personnel <i>capabilities</i> are reviewed and assessed and design brief modified in accordance with assessed and available skills</p> <p>2.8. <i>Material</i> or resource <i>supply chain</i> to the company is assessed, stock sizes set and design brief modified or altered to cater for availability of resources</p> <p>2.9. <i>Outsourcing</i> opportunities are assessed and reviewed in accordance with <i>cost benefit analysis</i></p>

ELEMENT	PERFORMANCE CRITERIA
	<p>2.10. <i>Workflow methods</i> are reviewed and the design brief or workflow methods amended to cater for limited production</p> <p>2.11. Opportunities for innovation in mass production procedures are researched and implemented</p>
3. Implement design	<p>3.1. <i>Manufacturing process</i> is planned and organised taking into account available equipment and resources</p> <p>3.2. Material is processed in accordance with the manufacturing plan and safe working procedures</p> <p>3.3. <i>Jigs</i> are produced to assist with the manufacture of <i>components</i></p> <p>3.4. Components are produced and prepared for <i>assembly</i></p> <p>3.5. Components are assembled in accordance with the working drawings</p> <p>3.6. <i>Final product</i> is <i>finished</i> according to specifications</p> <p>3.7. Final product is evaluated for <i>functionality</i> and <i>aesthetic</i> appeal</p> <p>3.8. Mass production methodology is reviewed</p> <p>3.9. Production run is <i>packaged and despatched</i> to <i>transport</i> methods</p> <p>3.10. Mass production anomalies are <i>recorded and reported</i> to the appropriate personnel</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to the needs for a furnishing product
- communicate ideas, information and advice to client to enable confirmation of design requirements, plans and specifications
- prepare design proposals
- listen to client or customer needs
- work with others and in a team understand product needs and produce design proposals
- reviewing information provided and creatively generate proposals for a furnishing product
- apply research, analytical and mathematical skills to the identification and selection of materials and the selection of appropriate production and construction techniques for the product
- plan activities covering the choice of design method, the preparation and layout of the product proposals
- use mathematical ideas and techniques to correctly complete technical details of the proposed designs
- create innovative designs which satisfy the agreed parameters and consider but are not limited by other historical or contemporary influences
- recognise and respond to circumstances outside instructions or personal competence
- adopt a proactive relationship with the client
- identify new enterprise opportunities when developing product proposals
- clarify and confirm work instructions
- plan design work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal design work goals
- satisfy the competency requirements for the job
- maintain current knowledge of batch and limited production methods
- maintain current knowledge of design methods
- seek learning opportunities
- use the workplace technology related to the production of technical information for production details
- use of workplace electronic media to communicate with client, suppliers and subcontractors.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to designing for mass production
- organisational and site standards, requirements, policies and procedures for designing for mass production

REQUIRED SKILLS AND KNOWLEDGE

- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- ergonomics and aesthetic values
- supply chain management
- outsourcing arrangements
- cost benefit analysis methods
- company resource audit techniques
- design and manufacture for mass production
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- computer programs
- product machining, assembly and finishing techniques
- sketching and drawing
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively work through the design taking into account the requirements of mass production to fulfil the design brief and oversee a mass production run
- Effectively apply design elements and principles to designing for mass production
- Effectively design for mass production in accordance with a design brief
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for designing for mass production
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to designing for mass production
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions

EVIDENCE GUIDE	
	<p>(real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures • requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation • requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Design brief	<ul style="list-style-type: none"> • may include but not be limited to the aims, objectives, milestones for the design project, the point of reference for everyone, elements and principles of design and may include organisational or personal profiles, aims, target audience, budget, timeline, consultation requirements, colour requirements, image requirements and function

RANGE STATEMENT	
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Elements of design	<ul style="list-style-type: none"> may include but not be limited to line, shape, form (geometric or organic), texture, colour, and function
Principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, dominant, sub dominant or subordinate relationship, emphasis, proximity, alignment, space, anthropometry, ergonomics, arrangement, workload, materials handling capacity, skills, control, equipment capabilities, aesthetic relations, tension and development methods
Concepts	<ul style="list-style-type: none"> are to include ideas generated to respond to the design brief through both ideation drawings or sketching and written explanation
Solutions	<ul style="list-style-type: none"> may include but not be limited to a range of concepts, sketches, drawings, maquettes, models and prototypes
Maquette	<ul style="list-style-type: none"> is to include a miniature version of the intended final product to establish if the elements and principles of design have been achieved. These are usually produced from cardboard or scrap timber.
Prototype	<ul style="list-style-type: none"> is usually a full size replica of the intended product outcome based on concept sketches and free hand development drawings, these are usually produced from stiff cardboard, scrap timber or possibly even moulding clay
Working drawings	<ul style="list-style-type: none"> may include but not be limited to drafted technical drawings or drawings produced on computer using computer aided drafting software packages. These usually contain project specifications

RANGE STATEMENT	
Specifications	<ul style="list-style-type: none"> are to include the measurements, procedures by which a product is constructed and materials to be utilised
Equipment	<ul style="list-style-type: none"> may include but not be limited to static machinery, portable power tools and computer numerically controlled equipment may also include procedures for lock out protecting operators and co-workers from accidental injury by isolating the machine from the power source
Obtainability	<ul style="list-style-type: none"> is to include the assessment of additional equipment requirements in regard to availability based on limited production requirements
Capabilities	<ul style="list-style-type: none"> are to include but not be limited to the available equipment and personnel skills available within an organisation and the flexibility of these
Material	<ul style="list-style-type: none"> may include but not be limited to native timber (native and imported), man-made timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Supply chain	<ul style="list-style-type: none"> may include but not be limited to the network and integration of suppliers, wholesalers and distributors who supply resources to the company in a timely and cost effective manner
Outsourcing	<ul style="list-style-type: none"> is to include the transfer of the provision of services previously carried out by in-house personnel to an external organisation, usually under a contract with agreed standards, costs and conditions
Cost benefit analysis	<ul style="list-style-type: none"> is to include the assignment of monetary value to the costs and benefits (social, environmental and monetary) associated with a project for the purpose of selecting and evaluating project investment opportunities
Workflow methods	<ul style="list-style-type: none"> is to include the arrangement of workspace, equipment and personnel so that work is carried out in the most efficient way
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques

RANGE STATEMENT	
Jigs	<ul style="list-style-type: none"> may include but not be limited to templates, patterns or frames for the manufacturing ease of components in production runs, these may assist machining or assembly
Components	<ul style="list-style-type: none"> may include but not be limited to the parts which make up the whole of a product. Each component is often requires some level of machining to result in the desire part
Assembly process	<ul style="list-style-type: none"> may include but not be limited to nailing, gluing, screwing, welding, pressing, sewing, bonding, jointing or connecting various materials
Final product	<ul style="list-style-type: none"> may include but not be limited to items which are functional, applied, commercial or artistic
Finishing	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils and plastic coatings
Functionality	<ul style="list-style-type: none"> is to include the purpose intended for the product in relationship to the design brief
Aesthetics	<ul style="list-style-type: none"> are to include the consideration of appeal to a large number of people; products are pleasing to the eye of many who view them
Packaging and despatch	<ul style="list-style-type: none"> may include but not be limited to wrapping in fabric, plastic wrapping, shrink wrapping, boxing, foam shells and despatch by truck, trailer, train, plane or ship
Transport	<ul style="list-style-type: none"> may include but not be limited to movement by truck, trailer, train, plane or ship
Records and reports	<ul style="list-style-type: none"> may include but not be limited to the design and production method, product type, size, inspection and labelling outcomes, storage locations, quality outcomes, hazards, incidents or equipment malfunctions

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFDT6003A Evaluate and participate in design industry networks

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to evaluate and participate in design industry networks to learn from others and develop networks which may assist with the progressing of own initiatives.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. Evaluating and participating in design industry networks applies to an industry workplace or design studio environment and involves application of skills and knowledge at a managerial level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires communication skills in order to interact meaningfully with others in the design industry. Planning and organising and problem solving skills, with initiative and enterprise are applied to determine and meet the information needs of various networks. Self management and learning skills are used to gather and apply feedback about effectiveness in meeting networking objectives.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Evaluate networks	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational requirements</i> relevant to evaluating and participating in design industry networks are verified and complied with</p> <p>1.2. <i>Networking</i> opportunities are assessed and scheduled for attendance</p> <p>1.3. Networking opportunities are prioritised in order of benefit and importance</p> <p>1.4. <i>Peak bodies</i> or associations and links to international agencies are assessed for networking opportunities</p>
2. Participate in networks	<p>2.1. Chosen networks are identified and joined</p> <p>2.2. <i>Communication</i> with others is established and maintained in accordance with OHS requirements</p> <p>2.3. Chosen networks are attended</p> <p>2.4. Design shows are attended and networking opportunities instigated</p> <p>2.5. <i>Business opportunities</i> with others in networks are pursued</p> <p>2.6. Shared business interests or ideas are sought and followed up on</p> <p>2.7. <i>International networking opportunities</i> are pursued</p> <p>2.8. Networks are followed up with and regularly attended</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- use appropriate industry terminology and language to convey meaning
- maintain a network of relevant industry participants
- work effectively with others both within and outside of the workplace
- conduct quality checks on own work
- identify communication goals
- use communication tools such as computers, internet, email, databases
- read, interpret and follow information on work specifications, standard operating procedures and work instructions, and other reference material
- maintain accurate records
- communicate within the workplace
- sequence operations
- meet specifications
- clarify and check task-related information
- carry out work according to OHS practices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to evaluating and participating in design industry networks
- organisational and site standards, requirements, policies and procedures for evaluating and participating in design industry networks
- networking and networking opportunities
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- ergonomics and aesthetic values
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- product assembly techniques and equipment capabilities
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively evaluate and participate in design industry networks, establish and maintain important contacts
- Effectively apply design elements and principles to involvement in design industry networks
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for evaluating and participating in design industry networks
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to evaluating and participating in design industry networks
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the

EVIDENCE GUIDE	
	particular circumstance, but is able to be transferred to other circumstances <ul style="list-style-type: none">• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures • requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation • requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Networking	<ul style="list-style-type: none"> • may include but not be limited to building up and maintaining relationships with people whose interests are similar or whose friendship could bring advantages such as job or business opportunities • may also include but not be limited to design agencies, furnishing industry alliances, associations, peak bodies, government functions, exhibitions, showcases, industry events, functions, information

RANGE STATEMENT	
	networks and design hubs
Peak bodies or associations	<ul style="list-style-type: none"> may include but not be limited to design agencies and furnishing industry bodies
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Business opportunities	<ul style="list-style-type: none"> may include but not be limited to joint ventures, shared or loaned equipment, combined purchasing arrangements, design or manufacturing hub arrangements, design critiquing opportunities, new ideas, improving ideas and new contracts
International networking opportunities	<ul style="list-style-type: none"> may include but not be limited to overseas business opportunities or international showcases, investor or contract opportunities

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFFDT6004A Investigate legal requirements for design

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to investigate legal requirements for design, including procurement, business legalities, contractual obligations and operational issues.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes.</p> <p>Investigate legal requirements for design applies to an industry workplace or design studio environment and involves application of skills and knowledge at a managerial level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit requires communication, problem solving skills and initiative and enterprise to analyse legal information and assess implications for specific designs. Planning and organising skills are applied to assess design against legal criteria.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Research legal requirements	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational requirements</i> relevant to investigating legal requirements for design are verified and complied with</p> <p>1.2. <i>Communication</i> with others is established and maintained in accordance with OHS requirements</p> <p>1.3. <i>Legal requirements</i> affecting the enterprise are detected and researched</p> <p>1.4. <i>Enterprise</i> legal requirements are analysed and procedures developed and implemented to ensure full compliance</p>
2. Comply with legal requirements	<p>2.1. <i>Business registration</i> and <i>government procedures</i> are adhered to</p> <p>2.2. Suitable <i>employment conditions</i> including industrial relations are abided by</p> <p>2.3. <i>Contracts and invoices</i> used comply with legal requirements</p> <p>2.4. <i>Operational codes of practice</i> are researched and applied to day to day procedures</p> <p>2.5. Essential <i>insurances</i> are obtained and are regularly updated</p> <p>2.6. <i>Procurement rights</i> are adhered to and applied for own products</p> <p>2.7. OHS regulations are stringently applied and followed</p> <p>2.8. <i>Import and export regulations</i> are adhered to</p> <p>2.9. <i>Risk management</i> policies are applied, updated and maintained</p>

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This section describes the skills and knowledge required for this unit.

Required skills

- interpret legal documentation
- access industry standards
- analyse legal information
- maintain accurate records
- communicate within the workplace
- sequence operations
- meet specifications
- clarify and check task-related information
- carry out work according to OHS practices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to investigating legal requirements for design
- organisational and site standards, requirements, policies and procedures for investigating legal requirements for design
- business and operational legal requirements
- computer programs
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively investigate legal requirements for design and for the protection and efficient operation of the enterprise, ensuring all relevant legal requirements are in place
- Effectively produce a report on the legal requirements for a design business
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for investigating legal requirements for design
- Communicate effectively and work safely with others in the work area

Context of and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to investigating legal requirements for design
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that

EVIDENCE GUIDE	
	<p>competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <ul style="list-style-type: none">• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures • requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation • requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Communication	<ul style="list-style-type: none"> • may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language

RANGE STATEMENT	
Legal requirements	<ul style="list-style-type: none"> may include but not be limited to laws, regulations or policies which may affect the operating systems of an enterprise
Enterprises	<ul style="list-style-type: none"> may include but not be limited to sole traders, partnerships, trusts, franchises, agencies, companies or consortiums
Business registration	<ul style="list-style-type: none"> is to include business name registration, achievement of an Australian Business Number (ABN) and may include ownership transfer arrangements and licensing
Government procedures	<ul style="list-style-type: none"> may include taxation and accounting requirements, superannuation provisions, business activity statements and the Goods, Services Tax (GST), tax file number, Pay As You Go (PAYG) and withholding tax
Employment conditions	<ul style="list-style-type: none"> are to include but not be limited to industrial relations, award rates, employment conditions, unfair dismissal laws, equal employment opportunities, anti-discrimination, enterprise agreements, privacy, confidentiality and duty of care
Contracts and invoices	<ul style="list-style-type: none"> may include but not be limited to contracts deemed legal by authorities and may be with suppliers, owners, employees, landlords, agents, distributors or customers
Operational codes of practice	<ul style="list-style-type: none"> may include but not be limited to Australian Standards, industry codes of practice, equipment operating standards or regulations, resource access regulations
Insurances	<ul style="list-style-type: none"> may include but not be limited to professional indemnity, public liability, income protection, third party, comprehensive, building and contents insurance, workers compensation and any other legally prescribed insurance
Procurement rights	<ul style="list-style-type: none"> may include but not be limited to royalties, copyright, patents, trademarks, design registration, intellectual property and software licences
Import and export regulations	<ul style="list-style-type: none"> may include but not be limited to duties, tariffs, customs, immigration and any countries relevant import and export laws
Risk management	<ul style="list-style-type: none"> is to include provisions for ensuring all potential legal possibilities have been investigated and evaluated to minimise threats to continuing efficiency, profitability

RANGE STATEMENT

	and success of its operations
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Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFFDT6005A Work collaboratively on a design project

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to work collaboratively on a design project from initial agreement to fulfilment and delivery of the final product, applying integral design elements and principles.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes.</p> <p>Working collaboratively on a design project applies to an industry workplace or design studio environment and involves application of skills and knowledge at a managerial level. These skills and knowledge are to be used within the scope of the individual's job and authority.</p> <p>This unit includes employability skills in planning and organising, problem solving and initiative and enterprise to achieve design project outcomes. Teamwork and communication skills are fundamental in achieving collaborative results. Self management and learning are applied when reviewing and monitoring own role within a collaborative process.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for project collaboration	1.1. Applicable OHS, legislative and organisational requirements relevant to collaborating on a design project are verified and complied with 1.2. Project requirements are agreed with client , confirmed and clarified 1.3. Communication with others is established and maintained with all involved in the design process 1.4. Potential collaborators are scrutinised and confirmed based on displayed expertise potential 1.5. End users and other interested parties are involved in the collaboration
2. Work collaboratively on projects	2.1. Methods of collaboration are negotiated and followed 2.2. Project objectives are researched, a design brief developed and instigated 2.3. Ideas for concept development are shared and worked through 2.4. Concepts are critiqued and final outcomes agreed upon in accordance with the elements of design and principles of design 2.5. Management systems are set in place, plan developed and quality control measures adopted for the project 2.6. Type and quantity of material to be used is debated, agreed and obtained 2.7. Equipment requirements are debated and selected appropriate to project requirements 2.8. Project manufacturing procedures are debated and final manufacturing processes agreed including assembly techniques and finishing methods 2.9. Distribution channels, marketing and despatch strategies are debated and instigated 2.10. Final presentation of the project is made displaying respect for all collaborators
3. Evaluate design collaboration project	3.1. Quality systems are evaluated for effectiveness of outcomes 3.2. Client satisfaction with the project outcome is measured 3.3. Observations from collaborators on improvement of the process is collected

ELEMENT	PERFORMANCE CRITERIA
	3.4. Collaborators are assessed and reviewed for their effectiveness in the process 3.5. Systems are analysed for improvement opportunities

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- plan processes
- encourage interchange of ideas
- facilitate collaborative development of design concepts
- evaluate design process
- communicate effectively within the workplace, including liaising with other departments
- determine report requirements and present information in appropriate formats
- maintain accurate records
- sequence operations
- meet specifications
- clarify and check task-related information
- carry out work according to OHS practices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for working collaboratively on a design project
- organisational and site standards, requirements, policies and procedures for working collaboratively on a design project
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- ergonomics and aesthetic values
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- computer programs
- product machining, assembly and finishing techniques
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Effectively work collaboratively on a design project in accordance with client requirements, setting a project plan and design brief
- Effectively apply design elements and principles to working collaboratively on a design project
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for working collaboratively on a design project
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to working collaboratively on a design project
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that

EVIDENCE GUIDE	
	<p>competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <ul style="list-style-type: none">• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures • requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation • requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Client	<ul style="list-style-type: none"> • may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Communication	<ul style="list-style-type: none"> • may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and

RANGE STATEMENT	
	cultural differences, control of tone of voice and body language.
Collaboration	<ul style="list-style-type: none"> • may include but not be limited to a group of people working together to achieve an outcome • may include but not be limited to designers, senior management, tradespeople, consumers, sales staff, distributors and clients
Design brief	<ul style="list-style-type: none"> • may include but not be limited to the aims, objectives, milestones for the design project, the point of reference for everyone, elements and principles of design • may also include organisational or personal profiles, aims, target audience, budget, timeline, consultation requirements, colour requirements, image requirements and function
Concepts	<ul style="list-style-type: none"> • are to include ideas generated to respond to the design brief through both ideation drawings or sketching and written explanation
Critique	<ul style="list-style-type: none"> • is to include the process of undertaking a critical analysis of a product, the design process used, the manufacturing methodology and final outcomes
Elements of design	<ul style="list-style-type: none"> • may include but not be limited to line, shape, form (geometric or organic), texture, colour, and function
Principles of design	<ul style="list-style-type: none"> • may include but not be limited to balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, dominant, sub dominant or subordinate relationship, emphasis, proximity, alignment, space, anthropometry, ergonomics, arrangement, workload, materials handling capacity, skills, control, equipment capabilities, aesthetic relations, tension and development methods
Management systems	<ul style="list-style-type: none"> • may include but not be limited to the project plan and attributes within it to fulfil the design brief and intended outcomes of the project. This may include personnel management, quality mechanisms, project stages, resource management, process management, problem solving mechanisms and performance targets
Quality control	<ul style="list-style-type: none"> • is to include an inspection system for ensuring that pre-determined quality standards are being met, highlighting non-conformances requiring intervention
Material	<ul style="list-style-type: none"> • may include but not be limited to native timber (native and imported), man-made timber products,

RANGE STATEMENT	
	plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Equipment	<ul style="list-style-type: none"> • may include but not be limited to static machinery, portable power tools and computer numerically controlled equipment • may also include procedures for lock out protecting operators and co-workers from accidental injury by isolating the machine from the power source
Manufacturing process	<ul style="list-style-type: none"> • may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Assembly process	<ul style="list-style-type: none"> • may include but not be limited to nailing, gluing, screwing, welding, pressing, sewing, bonding, jointing or connecting various materials
Finishing	<ul style="list-style-type: none"> • may include but not be limited to paints, waxes, lacquers, stains, pigments, oils and plastic coatings
Distribution channels	<ul style="list-style-type: none"> • may include but not be limited to self promotion and distribution, organisation through agents representing you, via hired distribution organisations, joint ventures or establishment of own distribution network
Market research fundamentals	<ul style="list-style-type: none"> • is to include research undertaken to assess the size and nature of a market
Despatch	<ul style="list-style-type: none"> • may include but not be limited to wrapping in fabric, plastic wrapping, shrink wrapping, boxing, foam shells and despatch by truck, trailer, train, plane or ship

Unit Sector(s)

Unit sector	Furniture design and technology.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFF1001B Complete a basic furniture finishing product

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the planning, preparation and completion of a basic furniture finishing project involving the coating of surfaces by either hand or spray application.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for work	1.1. Work requirements are correctly identified from drawings/ specifications/instructions 1.2. Quality assurance requirements are recognised and adhered to in accordance with enterprise operation 1.3. OHS requirements, including personal protection needs, are observed throughout the work 1.4. Tools, equipment and materials selected are consistent with job requirements and work instructions, checked for safety and serviceability and any faults reported to supervisor
2. Prepare surface and materials for finishing process	2.1. Surfaces are checked for contamination and correct preparation according to workplace procedures and standards 2.2. Products with surface or other faults are identified and faults are reported or repaired according to workplace procedures and standards 2.3. Techniques for application of materials for finishing process are identified and used according to workplace procedures 2.4. Materials suitable for basic surface finishing are prepared
3. Colour is applied to timber surface	3.1. Stain is applied to timber surfaces in accordance with manufacturers' specifications and workplace procedures and standards 3.2. Stained surface is sealed with polish using mop brush, blender or swooge 3.3. Sealed surface is lightly sanded to make smooth 3.4. Wood filler or sanding sealer are applied in accordance with manufacturers' specifications and workplace procedures and standards 3.5. Filled-in surface is sealed with oil varnish in accordance with manufacturers' specifications and workplace procedures and standards 3.6. Sealed surface is lightly sanded to make smooth.
4. Finishing material is applied to surface	4.1. Finishing material is applied in accordance with manufacturers' specifications until required build is achieved 4.2. Finishing material is cut back to remove surface defects and/or foreign material in accordance with workplace procedures and standards

ELEMENT	PERFORMANCE CRITERIA
	4.3. Surface is burnished with fine steel wool and lubricating oil to achieve even sheen
5. Clean up	5.1. Workplace is cleared of debris and unused materials 5.2. Wood filler and lubricating oil rags are disposed of safely having regard for spontaneous combustion 5.3. Tools and equipment are cleaned, maintained and stored

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to materials, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate coating problems, avoid re-working and avoid wastage
- use limited workplace technology related to coating

Required knowledge

- characteristics, limitations and uses of coating materials required for the project
- coating application equipment, techniques and safe working procedures
- basic repair techniques to defects in timber surfaces
- safe handling of materials associated with applying coatings

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Critical Aspects of Evidence	<ul style="list-style-type: none"> • Manufacturer specifications and operational procedures • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication
Resource Implications	Safe work area, coating materials, timber components/furnishings requiring finishing and cleaning materials.
Method of Assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.</p>
Context of Assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individual to demonstrate some discretion, judgement and problem solving skills in the accurate application of polish
A basic project may include:	<ul style="list-style-type: none"> • the coating of tables (occasional • coffee) • chairs or stools and other furnishing items
Stains may include but are not limited to:	<ul style="list-style-type: none"> • water stain • pigment oil stain • lacquer-based wiping stain
Wood grain filler may include but is not limited to:	<ul style="list-style-type: none"> • oil-based filler • polyurethane (plastic) filler • water-based filler
Finishing materials may include but are not limited to:	<ul style="list-style-type: none"> • oil varnish • marine varnish • lacquer and sanding sealer
Lubricating oil may include but is not limited to:	<ul style="list-style-type: none"> • linseed oil • paraffin oil • 'teak' oil
Surface faults may include:	<ul style="list-style-type: none"> • machine marks • bruising • pencil marks • grease • cross-sanding marks

RANGE STATEMENT	
	<ul style="list-style-type: none"> • scratches • glue marks • dirt marks • insect and termite holes • holes • knots • and blisters
Tools and equipment may include:	<ul style="list-style-type: none"> • filler blades • brushes • spray equipment • sandpapers • skinning in • bodying up and spiriting out rubbers • mop brush • blender • swooge and scrapers
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Manufacturer specifications and operational procedures • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFF2001B Use furniture finishing sector hand and power tools

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use hand and power tools, and basic static machines, in applications relating to the furniture finishing sector of the furnishing industry.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hand and power tools and basic static machines	1.1.Types of hand and power tools and basic static machines and their functions are identified 1.2.OHS requirements, including personal protection needs, are observed throughout the work 1.3.Sources of power supply recognised
2. Select hand tools	2.1.Hand tools selected are consistent with needs of the job 2.2.Selected hand tools are checked for serviceability and safety and any faults reported to supervisor 2.3.Equipment is selected to hold or support material for hand tool application where applicable
3. Use hand tools	3.1.Material is located and held in position for hand tool application 3.2.Hand tools are safely and effectively used according to their intended use 3.3.Hand tools are safely located when not in immediate use
4. Select power tools/basic static machines	4.1.Power tools/basic static machines are selected consistent with needs of the job in accordance with conventional work practice 4.2.Power tools/basic static machines are visually checked for serviceability/safety in accordance with OHS requirements and any faults reported to supervisor 4.3.Equipment is selected to hold or support materials for application as applicable
5. Use power tools/basic static machines	5.1.Material is located and held in position for power tool and/or machining applications as applicable 5.2.Power tools/basic static machines are safely and effectively used in application processes 5.3.Power tools are safely located when not in use
6. Clean up work area and tools	6.1.All tools are cleaned, maintained and stored 6.2.Equipment is cleaned, maintained and stored 6.3.Work area is cleared and waste removed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to hand and power tools/basic static machines, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite to avoid any back tracking, workflow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate problems, avoid re-working and wastage
- use workplace technology related to the operation and maintenance of hand and power tools/basic static machines
- work with others and in a team by recognising dependencies and using cooperative approaches

Required knowledge

- types, characteristics, uses, limitations and maintenance requirements of hand tools commonly used in furniture finishing operations
- types, characteristics, uses, limitations and maintenance requirements of power tools and basic static machines commonly used in furniture finishing operations
- OHS requirements and legislation
- workflow within the workplace

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Locate and apply relevant information related to sector hand and power tools/basic static machines
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, tools, equipment or products
 - maintain required production output and product quality
- Adopt and carry out correct procedures prior to and during use of hand, power tools and basic static machines as listed in the Range Statement
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Furniture polishing sector hand and power tools/basic static machines and materials used in the finishing of furniture.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and should be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate skill, accuracy and dexterity in the application of tools to work tasks

Hand tools for furniture polishing are to include:

- cabinet scraper
- chisel
- hammer
- nail punch
- cork sanding block
- putty knife
- paint scraper
- paint brush
- blender
- mop brush
- swooge
- pencil brush
- file
- oil stone

Hand tools for furniture polishing may also include:

- polish rubbers
- clamps
- screwdrivers
- rubber mallet
- spokeshave
- pliers
- pincers

RANGE STATEMENT	
	<ul style="list-style-type: none"> spanners
Power tools for furniture polishing are to include:	<ul style="list-style-type: none"> orbital sander steam iron spray gun compressor
Fixed/static machinery for furniture polishing are to include:	<ul style="list-style-type: none"> belt/stroke sander compressor
Fault reporting	Reporting of faults in the operation of hand and power tools/basic static machines may be verbal or written
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> Workplace procedures relating to the use of tools and equipment Work instructions, including job sheets, plans, drawings and designs Workplace procedures relating to reporting and communication Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFF2002B Dismantle/re-assemble furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to dismantle and re-assemble furniture and/or fittings for the purposes of coating, repair, restoration, producing patterns, templates or for samples.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Item to be dismantled is inspected and components identified 1.2. OHS requirements, including personal protection needs, are observed throughout the work 1.3. Work required, including the process/order for dismantling according to the workplace procedures, is identified 1.4. Tools and equipment are selected and checked for safe and effective operation for the task
2. Dismantle furniture/ furnishing item	2.1. Items to be dismantled are identified 2.2. Items are dismantled to the extent required in the work instructions using appropriate tools and procedures 2.3. Fasteners and attachments are removed, tagged and stored 2.4. Component parts are separated, tagged and stored following workplace procedures 2.5. Component parts dispatched to the next process according to workplace procedures
3. Dismantle furniture/ furnishing item	3.1. Items to be re-assembled are identified 3.2. Items are re-assembled to the extent required in the work instructions using appropriate tools and procedures 3.3. Fasteners and attachments selected and used according to workplace procedures 3.4. Fasteners and attachments selected and used according to workplace procedures 3.5. Assembled item dispatched to the next process according to workplace procedures
4. Clean work area maintain equipment and complete operations	4.1. Equipment used is cleaned, inspected for serviceable condition and stored according to workplace procedures 4.2. Equipment faults are identified, tagged and reported to appropriate personnel 4.3. Work area is cleaned and returned to operational condition

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, furniture construction methods, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate dismantling/reassembly problems, avoid re-working and avoid wastage
- use the workplace technology related to dismantling/re-assembly, including tools, equipment, materials and measuring devices

Required knowledge

- the types and characteristics of materials used in furniture/furnishings construction
- construction techniques and processes
- identification of equipment, processes and procedures
- workflow in relation to dismantling and re-assembling furniture/furnishings

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical Aspects of Evidence</p>	<ul style="list-style-type: none"> • Locate, interpret and apply relevant information • Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment • Identify materials used in the construction of the item being dismantled/re-assembled • Follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> • minimise the risk of injury to self or others • prevent damage to goods or equipment • maintain required work output and quality • Dismantle and re-assemble at least three different items, including: <ul style="list-style-type: none"> • one assembled with knockdown fittings, and • one with glued joints • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
<p>Resource Implications</p>	<p>Furniture/furnishings for dismantling/re-assembling, work instructions, tools and equipment.</p>
<p>Method of Assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may, where appropriate, be in conjunction with assessment of other units of competency.</p>
<p>Contexts of Assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills during the process of dismantling of furniture and/or furnishings
<p>Furniture and/or furnishings may include but are not limited to:</p>	<ul style="list-style-type: none"> • chairs • tables • desks • wall units • buffets • side tables • drawers <p>Work can involve dismantling and re-assembling of furniture for repair and restoration</p>
<p>Tools and equipment may include, but are not limited to:</p>	<ul style="list-style-type: none"> • measuring tapes or rulers • hammers • rubber mallet • pincers • screwdrivers • shifting spanner • spanners • socket set • hacksaw and blades • clamps • timber wedges

RANGE STATEMENT	
	<ul style="list-style-type: none"> • long nose pliers • power drill/screwdrivers • air compressor and hoses
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • timber • manufactured board • veneer • brass • metal • adhesive • laminate • perspex
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFF2003B Remove surface coatings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to safely remove surface coatings by hand or chemical means in preparation for the application of new surface coatings.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for surface coating removal	1.1. Materials safety data sheets and/or product application and safety information are read and used to inform work practices 1.2. OHS requirements, including ventilation requirements and personal protection needs, are observed throughout the work 1.3. Surface coating is tested to identify the type of material and methods required remove the coating 1.4. Tools, equipment and materials suitable for the removal tasks are selected and checked for safe operation/application 1.5. Accessories and consumables are identified for the removal tasks
2. Remove surface coatings	2.1. Sequence of work is identified, maximising potential of any chemical for the removal operation 2.2. Equipment, chemicals and abrasives are used within manufacturer specifications and workplace procedures 2.3. Surface coating is removed according to workplace procedures and specifications 2.4. Surfaces are inspected to ensure removal of surface coating is to workplace standard 2.5. Defects found after removal of surface coating are dealt with and/or reported in accordance with workplace procedures
3. Clean work area and maintain equipment	3.1. Item is stored and labelled ready for next process 3.2. Equipment is cleaned and inspected for serviceable condition and stored appropriately 3.3. Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed 3.4. Chemicals and other materials are stored or disposed of correctly according to regulations 3.5. Work area is cleaned ready for next process or task

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to hardware identification and selection, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate removal problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the selection and application, including hardware options, tools, equipment and measuring devices

Required knowledge

- workflow in relation to the removal of surface coatings
- the types, properties and characteristics of coatings
- coating removal techniques, materials, applications and limitations
- material safety management systems

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, tools, equipment or products
 - maintain required production output and product quality
- Remove surface coating from timber and metal surfaces, and apply appropriate techniques to remove coatings from flat, vertical, carved and curved surfaces, using a minimum of four different removal techniques and materials
- Work effectively with others
- Modify activities to cater for variations in workplace contexts

Resource Implications

Range of surfaces to be removed, removal methods, tools, equipment and consumables.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the removal of surface coatings

Coated surfaces may include but are not limited to:

- solid timber
- manufactured board
- metal

Tools and equipment may include, but are not limited to:

- liquid containers
- brushes
- scrapers
- scrubbing brush
- steel wool
- sanding blocks
- heat guns
- high pressure water cleaners
- dipping tanks
- stainless steel stripping bench
- iron
- plane
- chisels
- power sanders
- air compressor and hoses

Materials to be used may include but are not limited to:

- caustic soda
- thinners

RANGE STATEMENT	
	<ul style="list-style-type: none"> • turpentine • methylated spirits • gun wash • gel stripper • putties • hot water • glues • abrasive paper
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFFF2004B Prepare surfaces for finishing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to prepare surfaces for the application of surface coatings by hand or machine.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for surface preparation	1.1.Characteristics of the surface and the required surface coating materials are identified 1.2.OHS requirements, including personal protection needs, are observed throughout the work 1.3.Tools and equipment required, related engineering controls identified and set up 1.4.Sources of contamination in work area are identified and excluded 1.5.Workplace procedures for surface preparation are identified and followed according to the surface and surface coating materials being used
2. Prepare surfaces	2.1.Surfaces are prepared according to workplace procedures and specification 2.2.Surface preparation is checked for conformity with workplace specifications throughout the process 2.3.Rectification of surface preparation faults are made as required 2.4.Products are inspected and approved for suitability for further processing 2.5.Defects are rectified and/or reported in accordance with workplace procedures
3. Clean work area and maintain equipment	3.1.Prepared products are packed, stored and labelled ready for next process 3.2.Equipment used is cleaned and inspected for serviceable condition and stored appropriately 3.3.Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed 3.4.Chemicals used are stored or disposed of correctly according to regulations 3.5.Work area is cleaned ready for next process or task

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, hazardous substances and materials and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate surface preparation problems, avoid re-working and wastage
- use the workplace technology related to the preparation of surfaces, including manual and pressure tools, equipment and measuring devices

Required knowledge

- the types, properties and characteristics of coatings
- surface preparation techniques and equipment/ materials
- hazardous substances and materials used in surface preparation
- workflow in relation to the application and removal of surface coatings

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Prepare surfaces on a minimum of four occasions, including:
 - horizontal surface
 - vertical surface
 - internal surface
 - curved surface (moulding)
- Surfaces are to include:
 - solid hardwood
 - solid softwood
 - veneered board
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Range of surfaces to be prepared, preparation tools, equipment and consumables.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other relevant units of competency.

EVIDENCE GUIDE	
Context of Assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the preparation of surfaces

Surfaces

- Surfaces to be prepared may include but are not limited to:
- solid timber
 - manufactured board
 - metal

Tools and equipment are to include:

- measuring tapes and rulers
- squares
- hammer
- nail punch
- liquid containers
- brushes
- cabinet scrapers
- file
- oil stone
- steel wool/scourers
- sanding blocks
- steam iron
- chisels
- power sanders
- air compressor and hoses
- fixed belt/stroke sander

RANGE STATEMENT**Tools and equipment may also include:**

- plane
- spanners
- screwdrivers
- clamps
- drill
- mallet
- vice
- saw

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFF2005B Maintain spray equipment and booth

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to strip, clean, restore and service spray equipment and booths.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including timings, equipment to be maintained and materials 1.2. OHS requirements, including ventilation and personal protection needs, are observed throughout the work 1.3. Tools, equipment and accessories are identified and checked for safe and effective operation 1.4. Work area is cleared of unwanted stock, products and materials 1.5. Equipment is isolated from power sources and made safe in accordance with site procedures
2. Maintain the equipment	2.1. Equipment is dismantled in accordance with manufacturers' specifications and site procedures 2.2. Components are laid out in a logical reassembly sequence 2.3. Components are cleaned and serviced using authorised materials and tools/equipment 2.4. Components are inspected and faulty items repaired, replaced or referred for further maintenance action 2.5. Equipment is reassembled and operations are tested 2.6. Equipment maintenance is reported/recorded in accordance with site procedures
3. Maintain booths	3.1. Combustion and ignition sources are neutralised throughout the work sequence 3.2. Ventilation and other services are inspected for operation, cleaned out and, where appropriate, replenished, replaced or referred for further maintenance action 3.3. Surfaces and floors are cleaned and restored in accordance with site and industry standards 3.4. Materials and consumable stores are cleaned and restored in accordance with site, industry and regulatory standards

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to spray systems and equipment, maintenance materials, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly estimate material requirements
- use pre-checking and inspection techniques to anticipate maintenance problems, avoid reworking and avoid wastage
- use the limited workplace technology related to maintenance, including machines, tools, equipment, and measuring devices

Required knowledge

- identification of spray system equipment, processes and procedures
- the types, characteristics and maintenance requirements for spray booth services, including at a minimum ventilation, lighting, water and electrical reticulation
- characteristics of the coatings and base materials in terms of toxicity, reactivity and flammability
- types, characteristics, uses and limitations of cleaning solvents and agents
- effects of the fumes, heat and other radiations on surface coatings
- material safety management systems

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Locate, interpret and apply information relevant to the spray equipment and booth services
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment or products
 - maintain required standards and quality
- Disassemble, maintain and reassemble at least two different spray systems
- Maintain a booth and booth services on at least two occasions
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment.

Resource Implications

Spray systems and equipment, spray booth, cleaning and maintenance materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
Spray equipment may include:	<ul style="list-style-type: none"> • computerised spray system • electrostatic spray gun • powder coating spray gun • air compressor and hoses and dryers
Booths	<p>Booths is a generic term for areas specifically used for the hand or mechanical application of coatings/paint. They may range from a dry filter bath to a purpose-designed, positive-pressure, down-draft water booth</p>
Booth services may include:	<ul style="list-style-type: none"> • lighting • ventilation • electricity supply • water supply • paint lines • consumables storage areas
Tools and equipment may include:	<ul style="list-style-type: none"> • liquid containers • feeding systems • spray guns • scrapers (non-ferrous) screwdrivers • shifting spanner • spanners
Materials to be used may include are not limited to:	<ul style="list-style-type: none"> • water • solvents • other cleaning compounds and chemicals

RANGE STATEMENT	
	<ul style="list-style-type: none"> • rags • steel wool • brushes • hoses • brooms • squeegees
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to tools and equipment • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFFF2006B Apply surface coatings by spray gun

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to apply surface coatings by hand-held spray gun.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1.Characteristics of the surface and the required surface coating are identified from work orders or instructions</p> <p>1.2.Processing and application techniques, time and safety requirements are identified and used for work planning</p> <p>1.3.OHS requirements, including ventilation requirements and personal protection needs, are observed throughout the work</p> <p>1.4.Tools, equipment and accessories are identified and checked for safe and effective operation for the surface coating task</p> <p>1.5.Stains, lacquers, polish, enamels, acrylics, one-pot polyurethane and water-based coatings are identified and prepared as required for the surface coating tasks</p>
2. Check and prepare for spraying	<p>2.1.Products with surface or other faults are identified and faults reported or repaired as appropriate</p> <p>2.2.Other products and equipment in the workplace are protected from overspray</p> <p>2.3.Trial applications of surface materials are made to check condition of spray system, spray patterns, equipment operation, materials viscosity and specified surface finish</p> <p>2.4.Unserviceable components are cleaned or replaced and spray system reassembled</p> <p>2.5.Spray pattern faults are identified and rectified in accordance with workplace procedures.</p> <p>2.6.Material faults are identified and workplace procedures for rectification are followed</p>
3. Apply surface coating	<p>3.1.Surfaces are kept free of contamination</p> <p>3.2.Surface coatings are applied according to workplace procedures</p> <p>3.3.Surface build and coverage is checked against workplace requirements for even spread and thickness</p> <p>3.4.Rectification of surface faults are made in accordance with workplace procedures</p> <p>3.5.Products are inspected and approved for suitability for further processing</p>
4. Clean work area and	4.1.Equipment is cleaned and inspected for serviceable

ELEMENT	PERFORMANCE CRITERIA
maintain equipment	condition and stored appropriately 4.2. Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed 4.3. Work area, including spray booth is cleaned and returned to approved condition 4.4. Workplace records are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to spray equipment and painting materials, work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate coating problems, avoid re-working and wastage
- use the workplace technology related to spraying operations including tools, equipment and measuring devices

Required knowledge

- identification of spray equipment, processes and procedures
- characteristics of the coatings and base materials in terms of toxicity, reactivity, flammability, required viscosity and recoatability
- effects of the fumes, heat and other radiations on surface coatings
- the methods to prevent contamination of surfaces during and after surface coating
- workflow in relation to spraying operations

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Locate, interpret and apply information relevant to the materials being applied and the application equipment
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Select and apply surface coatings, including the adjustment of spray equipment to effect required spray pattern for a minimum of three different surface types and shapes
- Maintain spray equipment and work area, including spray booth
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Spray equipment, spray booth, coatings and cleaning products.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the application of surface coatings
Spray guns are to include:	<ul style="list-style-type: none"> • conventional air spray guns and airless spray guns and may include: HVLP and air-assisted airless spray gun
Coatings are to include:	<ul style="list-style-type: none"> • pre-catalysed lacquer • acid catalysed lacquer and may include: nitro-cellulose lacquer • one-pot polyurethane and water-based coatings
Tools and equipment may include but are not limited to:	<ul style="list-style-type: none"> • pressure feed systems • spray booth • liquid containers • air compressor and hoses • air regulator • positive pressure air-wash masks • canister-type face masks • screwdrivers • shifting spanner and spanners
Material to be applied may include but are not limited to:	<ul style="list-style-type: none"> • stains • lacquers • acrylics • one-pot polyurethane and water-based coatings

RANGE STATEMENT	
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFF2007B Apply stains, fillers and bleach

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to apply stains, fillers and bleach to timber surfaces.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Workplace information, including materials application and safety information, material safety data sheets, is used to inform work practices 1.2. Characteristics of the surface and the required surface treatment are identified from work orders or instructions 1.3. Processing and application techniques, time and safety requirements are identified and used for work planning 1.4. OHS requirements, including ventilation requirements and personal protection needs, are observed throughout the work 1.5. Tools, equipment and accessories are identified and checked for safe and effective operation for the staining, filling or bleaching task
2. Prepare for application of materials	2.1. Surfaces are checked for contamination and correct preparation according to workplace procedures and standards 2.2. Products with surface or other faults are identified and faults repaired as appropriate 2.3. Materials required to stain and fill in are identified and prepared for the task 2.4. Trial applications of stains and or fillers are made to check equipment operation, materials consistency, viscosity and specified colour 2.5. Faults and or inconsistencies in colour are identified and workplace procedures for rectification and adjustment are followed 2.6. Materials required for bleaching are identified and labelled to prevent cross-contamination of bulk material during application
3. Apply finishing materials	3.1. Techniques for application of stain, filler or bleach are identified 3.2. Materials are applied according to job instructions, material manufacturers' specifications and workplace procedures 3.3. Bleached items are appropriately stored for drying 3.4. Finished products are inspected and approved for suitability for further processing 3.5. Products which do not meet quality specifications are restrained, filled, bleached or tagged for further

ELEMENT	PERFORMANCE CRITERIA
	investigation.
4. Clean work area and maintain equipment	<p>4.1. Equipment used is cleaned and inspected for serviceable condition and stored appropriately</p> <p>4.2. Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed</p> <p>4.3. Bleaching materials are disposed of in accordance with environmental concerns and workplace procedures. Unused material must not be returned to bulk stock</p> <p>4.4. Work area is cleaned and returned to approved condition, all areas used for bleaching are washed down with water</p> <p>4.5. Workplace records are completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to coating materials, cleaning materials, work orders and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of coating equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate coating problems, avoid reworking and avoid wastage
- use the limited workplace technology related to coating, including tools, equipment and measuring devices

Required knowledge

- identification of application techniques
- characteristics of stains, fillers and bleaches in terms of toxicity, reactivity, flammability, viscosity.
- the methods to prevent contamination of surfaces during and after processing
- workflow in relation to the application stains, fillers and bleach

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

EVIDENCE GUIDE	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	
Context of, and specific resources for assessment	
Method of assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • Workplace health and safety requirements include OHS legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the application of stains, fillers and bleach
Stains are to include:	<ul style="list-style-type: none"> • lacquer-based wiping stain and spirit-based and may include: water and oil-based
Fillers are to include:	<ul style="list-style-type: none"> • oil-based • water-based and plastic (one-pot) filler
Bleach is to include:	<ul style="list-style-type: none"> • two-solution bleach and may include oxalic acid bleach
Surfaces	Surfaces include solid timber and manufactured board
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • liquid containers • rubber gloves • face masks • spray booths • spray guns • compressor • air lines • brushes • sanding block
Materials to be applied may include but are not limited to:	<ul style="list-style-type: none"> • stains • fillers

RANGE STATEMENT	
	<ul style="list-style-type: none"> • bleaches • water • abrasive papers • cotton rags and hessian
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFF2008B Apply surface coatings by hand

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to apply brushable coatings, including one-pot polyurethane, enamels, acrylics and polish, by hand.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Workplace information, including materials application and safety information, material safety data sheets is used to inform work practices</p> <p>1.2. Characteristics of the surface and the required surface finish are identified from work orders or instructions</p> <p>1.3. Processing and application techniques, time and safety requirements are identified and used for work planning</p> <p>1.4. OHS requirements, including ventilation requirements and personal protection needs, are observed throughout the work</p> <p>1.5. Tools, equipment and accessories are identified and checked for safe and effective operation for the surface finishing task</p>
2. Prepare for application of materials	<p>2.1. Surfaces are checked for contamination and correct preparation according to workplace procedures and standards</p> <p>2.2. Products with surface or other faults are identified and faults repaired as appropriate</p> <p>2.3. Finishing materials required are identified and prepared for the task</p> <p>2.4. Trial applications of surface materials are made to check equipment operation, materials consistency and specified surface finish</p> <p>2.5. Faults are identified and workplace procedures for rectification are followed</p>
3. Apply finishing materials	<p>3.1. Techniques for hand application of materials are identified</p> <p>3.2. Finishing materials are applied according to job instructions, material manufacturer specifications and workplace procedures</p> <p>3.3. Finished products are inspected and approved for suitability for further processing</p> <p>3.4. Products which do not meet quality specifications are refinished or tagged for further investigation</p>
4. Clean work area and maintain equipment	<p>4.1. Equipment used is cleaned and inspected for serviceable condition and stored appropriately</p> <p>4.2. Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed</p>

ELEMENT	PERFORMANCE CRITERIA
	4.3. Work area is cleaned and returned to approved condition 4.4. Workplace records are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to coating materials, cleaning materials, work orders and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of coating equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, estimate paint requirements and other material requirements
- use pre-checking and inspection techniques to anticipate coating problems, avoid reworking and avoid wastage
- use the limited workplace technology related to coating, including tools, equipment and measuring devices

Required knowledge

- identification of hand application techniques
- characteristics of coatings, waxes and oils in terms of toxicity, reactivity, flammability, required viscosity.
- the methods to prevent contamination of surfaces during and after finishing
- workflow in relation to the application of finishing material

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Prepare for and apply coatings by hand on a minimum of five occasions covering:
 - the three surface types
 - the four coatings detailed in the Range Statement
- Maintain application equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Hand finishing application equipment, coating materials, waxes and oils and surfaces to be coated.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous substance and dangerous goods codes and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the application of surface coatings
Coatings are to include:	<ul style="list-style-type: none"> • one-pot polyurethane • enamel • acrylic and polish
Application methods are to include:	<ul style="list-style-type: none"> • brush and swooge
Surfaces may include but are not limited to:	<ul style="list-style-type: none"> • solid timber • manufactured board • metal
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • sanders • pneumatic or low-voltage electric buff • rubber sanding block • brushes and swooges
Materials may include but are not limited to:	<ul style="list-style-type: none"> • water • detergent • wax • oil • enamel • acrylic • one-pot polyurethane • polish

RANGE STATEMENT	
	<ul style="list-style-type: none"> • methylated spirits • turpentine • terebine • abrasive papers • cotton rags • steel wool
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFFF3001B Match and make up colours

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to match and make up colours for surfaces which have previously been coated or polished, or for new work which must match existing work or specified sample.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare work	1.1. Work instructions are used to determine job requirements, including design, colour, finish process and quality 1.2. OHS requirements, including personal protection needs, are observed throughout the work 1.3. Colour matching aids and colouring materials are accessed and readied for use 1.4. Types of colouring materials are identified and prepared for colouring task 1.5. Tools, equipment and accessories are identified and checked for safe and effective operation
2. Match colours	2.1. Surfaces are cleaned and prepared to enable accurate colour matching 2.2. Characteristics of the surface and the impact of these on colouring are taken into account 2.3. Techniques for colour application are identified and selected according to workplace practices 2.4. Properties of colouring agents are assessed in relation to the specific circumstances 2.5. Colour matching techniques are applied to identify most likely fits in terms of product, colour and application techniques 2.6. Colour matching outcomes are confirmed through trials of proposed products, colours and application techniques 2.7. Colour matching formulae are recorded to enterprise or industry standards
3. Make up colours	3.1. Product quantities are identified from client demand or accurate assessment of coating/colouring requirement 3.2. Colouring additives are calculated from manufacturer specifications 3.3. Colouring additives are accurately measured and blended with the base product
4. Apply colours	4.1. Colour solution is applied in accordance with selected application techniques and workplace procedures 4.2. Colour application is constantly checked against sample colour 4.3. Surface is inspected for faults in applied colour film

ELEMENT	PERFORMANCE CRITERIA
	and defects are rectified 4.4. Coloured or matched up surface is sealed with finishing material in accordance with job specification and workplace procedures
5. Clean up	5.1. Colouring materials are stored and labelled ready for next process 5.2. Waste and unwanted material is disposed of safely and in accordance with relevant environmental regulations 5.3. Unused materials are sealed and stored 5.4. Tools and equipment are cleaned, maintained and stored

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to colour matching processes, products and techniques, work orders, plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, calculate colouring ratios and estimate material requirements
- use pre-checking and inspection techniques to anticipate colour matching problems, avoid re-working and wastage
- use the limited workplace technology related to colour matching aids, tools, equipment, calculators and measuring devices

Required knowledge

- the types, characteristics and degradation patterns of coatings and stains
- the properties of coated and stained surface materials and the impact of these on colouring
- the types, characteristics, uses and limitations of colouring agents
- the types, uses and limitations of matching aids
- product catalogues and other information systems
- material safety management systems and related safety requirements

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Locate, interpret and apply information relevant to the colour matching equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Accurately colour match using pigments and/or stains on a minimum of five occasions
- Record colour formulae for production situations
- Work effectively with others

Resource Implications

Safe work area, sample colouring requirements, colouring agents, base coating products, mixing and testing equipment and cleaning equipment and materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the accurate matching of colours
Tools and equipment may include:	<ul style="list-style-type: none"> • mixing pots • brushes • spray equipment and mechanical mixer/vibrator • colour rubber • colour wad
Materials may include:	<ul style="list-style-type: none"> • spirit-based stains • pigments • lacquers • oil varnish • two-part polyurethane • methylated spirits • lacquer thinners • mineral turpentine and polish
Colouring agents may include:	<ul style="list-style-type: none"> • pigments • dyes • stains • universal tinters and toning lacquer
Properties of colouring agents may include but not be limited	<ul style="list-style-type: none"> • colour • specific gravity

RANGE STATEMENT	
to:	<ul style="list-style-type: none"> • staining power • refractive power • texture • durability • opacity • spreading power • toxicity and oil absorptive power
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Manufacturer specifications and operational procedures • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFFF3002B Set up, operate and maintain mechanical coatings systems

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up, operate and maintain mechanical coating systems in order to apply coatings to specifications.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1.Characteristics of the surface and the required surface coating are identified from work orders or instructions 1.2.Processing and application techniques, time and safety requirements are identified and used for work planning 1.3.OHS requirements, including ventilation requirements and personal protection needs, are observed throughout the work 1.4.Tools, equipment and accessories are identified and checked for safe and effective operation for the surface coating task 1.5.Coating materials are identified and prepared
2. Check and prepare for spraying	2.1.Products with surface or other faults are identified and faults reported or repaired as appropriate 2.2.Other products and equipment in the workplace are protected from overspray 2.3.Trial applications of surface materials are made to check equipment operation, materials consistency and specified surface finish 2.4.Machine faults are identified and rectified or reported 2.5.Material faults are identified and workplace procedures for rectification are followed
3. Apply surface coating	3.1.Surfaces are kept free of contamination 3.2.Surface coatings are applied according to workplace procedures 3.3.Surface coating viscosity and coverage is monitored and checked against workplace requirements for even spread and thickness 3.4.Rectification of surface faults is made as required 3.5.Products are inspected and approved for suitability for further processing 3.6.Defects are dealt with and/or reported in accordance with workplace procedures
4. Clean work area and maintain equipment	4.1.Equipment is cleaned and inspected for serviceable condition and stored appropriately 4.2.Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed 4.3.Work area, including spray booth is cleaned and

ELEMENT	PERFORMANCE CRITERIA
	<p>returned to approved condition</p> <p>4.4. Workplace records are completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to coating system and machines, coating materials, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the notification of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate paint requirements and other material requirements
- use pre-checking and inspection techniques to anticipate coating problems, avoid re-working and avoid wastage
- use workplace technology related to mechanical coating systems, including machines, tools, equipment and measuring devices

Required knowledge

- identification of mechanical spray system equipment, processes and procedures
- characteristics of the coatings and base materials in terms of toxicity, reactivity, flammability, required viscosity and re-coatability
- effects of the fumes, heat and other radiations on surface coatings
- the methods to prevent contamination of surfaces during and after surface coating
- workflow in relation to spraying operations

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Locate, interpret and apply information relevant to the materials being applied and the application equipment
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Select and apply surface coatings, including the adjustment of spray equipment to effect required coating using a minimum of two different mechanical systems:
 - curtain coater
 - electrostatic
 - tumbler
 - dipping
 - roller coater (UV)
 - automatic (robotic) spray equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Mechanical spray systems and equipment, spray booth, coatings and cleaning products.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

EVIDENCE GUIDE	
Context of Assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the application of surface coatings
<p>Surface coating operations</p>	<p>This unit covers work involved in the application of surface coatings by mechanical methods other than by conventional hand-held spray gun or airless spray gun</p> <p>Surface coatings are to include: a minimum of two of those required for curtain coating, UV coating, tumbling, dipping and electrostatic powder coating tasks</p>
<p>Tools and equipment are to include:</p>	<ul style="list-style-type: none"> • computerised spray system • electrostatic spray gun • baking oven • barrel tumbler • spray booth • liquid containers • air compressor and hoses • screwdrivers • shifting spanner and spanners • ford cup
<p>Materials to be applied may include but are not limited to:</p>	<ul style="list-style-type: none"> • stains • lacquers • wax

RANGE STATEMENT	
	<ul style="list-style-type: none"> • oil • two-pack polyurethane • three-pack polyester • enamels • acrylics • powder coating
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFFF3003B Apply plural component coatings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to apply plural component polyurethane, polyester coatings and acid catalysed coatings.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Workplace information, including materials application and safety information, material safety data sheets, is used to inform work practices</p> <p>1.2. Characteristics of the surface and the required surface treatment are identified from work orders or instructions</p> <p>1.3. Processing and application techniques, time and safety requirements are identified and used for work planning</p> <p>1.4. OHS requirements, including ventilation requirements and personal protection needs, are observed throughout the work</p> <p>1.5. Tools, equipment and accessories are identified and checked for safe and effective application of polyurethane, polyester and acid catalysed coatings</p>
2. Prepare for application of materials	<p>2.1. Surfaces are checked for contamination and correct preparation according to workplace procedures and standards</p> <p>2.2. Products with surface or other faults are identified and faults repaired as appropriate</p> <p>2.3. Materials required are identified and prepared for the task</p> <p>2.4. Spray booths and work documentation are inspected to ensure nitro-cellulose lacquer has not been sprayed in the same booth as that used for the application of two/three part polyurethane/polyester coatings</p> <p>2.5. Nitro-cellulose overspray is cleaned off booth surfaces if necessary before application of two/three-part polyurethane/polyester</p> <p>2.6. Trial applications of two-part polyurethane/polyester and acid catalysed coatings are made to check equipment operation, materials consistency and viscosity</p> <p>2.7. Faults and/or inconsistencies in applied coating are identified and workplace procedures for rectification and adjustment are followed</p>
3. Apply finishing materials	<p>3.1. Techniques for application of plural component coatings are identified and selected</p> <p>3.2. Materials are applied according to job instructions, material manufacturer specifications and workplace procedures</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3.Finished products are inspected and approved for suitability for further processing 3.4.Products which do not meet quality specifications are rectified or tagged for further investigation
4. Clean work area and maintain equipment	4.1.Equipment used is cleaned and inspected for serviceable condition and stored appropriately 4.2.Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed 4.3.Work area is cleaned and returned to approved condition 4.4.Workplace records are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to coating materials, cleaning materials, work orders and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of coating equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate paint requirements and other material requirements
- use pre-checking and inspection techniques to anticipate installation problems, avoid re-working and wastage
- use the limited workplace technology related to coating, including tools, equipment and measuring devices

Required knowledge

- identification of application techniques
- characteristics of acid catalysed, polyurethane and polyester coatings
- the methods to prevent contamination of surfaces during and after coating
- workflow in relation to the application of polyurethane and polyester

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Apply plural component coatings on at least three occasions, including:
 - one acid catalysed
 - one two-pot polyurethane
 - applications, including flat, vertical and internal surfaces
- Maintain application equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Spray application equipment, acid catalysed, polyurethane and polyester coatings.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> OHS requirements may include legislation, building codes, material safety management systems, hazardous substance and dangerous goods codes and local safe operating procedures Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements Work requires individuals to demonstrate discretion, judgement and problem solving skills in the installation of surface coatings
Plural component coatings are to include:	<ul style="list-style-type: none"> acid catalysed and two-pot polyurethane and may include: polyester and metallic finishes
Application techniques and processes are to include:	<ul style="list-style-type: none"> brushing and spraying
Surfaces may include but are not limited to:	<ul style="list-style-type: none"> solid timber manufactured board metal
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> liquid containers rubber gloves positive pressure air wash face masks positive pressure water wash spray booths protective clothing spray guns compressor air lines brushes sanding block orbital sanders
Materials to be applied may	<ul style="list-style-type: none"> two-part polyurethane

RANGE STATEMENT	
include but are not limited to:	<ul style="list-style-type: none"> • two/three part polyester • acid catalysed lacquer • solvents
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<p>Workplace procedures relating to the use and operation of tools and equipment</p> <p>Work instructions, including job sheets, plans, drawings and designs</p> <p>Workplace procedures relating to reporting and communication</p> <p>Manufacturer specifications and operational procedures</p>

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFFF3004B Apply soft rubber techniques

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to apply polish and/or spirit varnish to surfaces using soft rubber techniques.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Workplace information, including materials application and safety information, material safety data sheets, is used to inform work practices</p> <p>1.2. Characteristics of the surface and the required surface finish are identified from work orders or instructions</p> <p>1.3. Processing and application techniques, time and safety requirements are identified and used for work planning</p> <p>1.4. OHS requirements, including ventilation requirements and personal protection needs, are observed throughout the work</p> <p>1.5. Tools, equipment and accessories are identified and checked for safe and effective operation for the surface finishing task</p>
2. Prepare for application of materials	<p>2.1. Surfaces are checked for contamination and correct preparation according to workplace procedures and standards</p> <p>2.2. Products with surface or other faults are identified and faults repaired as appropriate</p> <p>2.3. Finishing materials required are identified and prepared for the task</p> <p>2.4. Trial applications of surface materials are made to check rubber operation, materials consistency and specified surface finish</p> <p>2.5. Faults are identified and workplace procedures for rectification are followed</p>
3. Apply soft varnish/rubber	<p>3.1. Surface is lightly sanded and checked for defects which are rectified in accordance with workplace procedures</p> <p>3.2. Rubber is suitably charged</p> <p>3.3. Surface is soft-rubbered/varnish rubbered using correct amount of pressure and suitable rubber movements</p> <p>3.4. Surface is inspected and any defects repaired/rectified</p>
4. Clean work area and maintain equipment	<p>4.1. Equipment used is cleaned and inspected for serviceable condition and stored appropriately</p> <p>4.2. Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed</p>

ELEMENT	PERFORMANCE CRITERIA
	4.3. Work area is cleaned and returned to approved condition 4.4. Workplace records are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to soft rubber coating materials, cleaning materials, work orders and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of coating equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate paint requirements and other material requirements
- use pre-checking and inspection techniques to anticipate soft rubber coating problems, avoid re-working and avoid wastage
- use the limited workplace technology related to soft rubber coating, including tools, equipment and measuring devices

Required knowledge

- soft rubber applications, limitations and techniques
- characteristics of coatings in terms of toxicity, reactivity, flammability, required viscosity
- the methods to prevent contamination of surfaces during and after finishing
- workflow in relation to the application of finishing material

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Accurately apply soft/varnish rubber techniques on a minimum of two occasions which must cover a chair or equivalent, and a large flat surface
- Maintain application equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Soft rubber materials, coating materials, other consumables and surfaces to be coated.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit context	<ul style="list-style-type: none"> OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the application of soft rubber techniques
Soft rubbers	Soft rubbers consist of cotton-wool or wadding body wrapped in cotton cloth and are used for either polish or varnish
Surfaces may include but are not limited to:	<ul style="list-style-type: none"> solid timber and manufactured board
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> brushes swooges soft rubbers and sanding blocks
Materials may include but are not limited to:	<ul style="list-style-type: none"> polish methylated spirits spirit varnish scourer abrasive papers cotton rags steel wool
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> Workplace procedures relating to the use of

RANGE STATEMENT

	tools and equipment <ul style="list-style-type: none"> • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures
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Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFF3005B Enhance finishes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to cut and buff and to apply materials to a coated surface by hand to enhance the finish.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Workplace information, including materials application, safety information and material safety data sheets, is used to inform work practices</p> <p>1.2. Characteristics of the surface and the required surface finish are identified from work orders or instructions</p> <p>1.3. Processing and application techniques, time and safety requirements are identified and used for work planning</p> <p>1.4. OHS requirements, including ventilation requirements and personal protection needs, are observed throughout the work</p> <p>1.5. Tools, equipment and accessories are identified and checked for safe and effective operation for the surface finishing task</p>
2. Prepare for application of materials	<p>2.1. Surfaces are checked for contamination and correct preparation according to workplace procedures and standards</p> <p>2.2. Products with surface or other faults are identified and faults repaired as appropriate</p> <p>2.3. Finishing materials required are identified and prepared for the task</p> <p>2.4. Trial applications of surface materials are made to check equipment operation, materials consistency and specified surface finish</p> <p>2.5. Faults are identified and workplace procedures for rectification are followed</p>
3. Apply finishing materials	<p>3.1. Techniques for hand application of materials are identified</p> <p>3.2. Finishing materials are applied according to job instructions, material manufacturers' specifications and workplace procedures</p> <p>3.3. Finished products are inspected and approved for suitability for further processing</p> <p>3.4. Products which do not meet quality specifications are refinished or tagged for further investigation</p>
4. Clean work area and maintain equipment	<p>4.1. Equipment used is cleaned and inspected for serviceable condition and stored appropriately</p> <p>4.2. Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed</p>

ELEMENT	PERFORMANCE CRITERIA
	4.3. Work area is cleaned and returned to approved condition 4.4. Workplace records are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to coating materials, cleaning materials, work orders and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of coating equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate paint and other material requirements
- use pre-checking and inspection techniques to anticipate coating problems, avoid re-working and wastage
- use the limited workplace technology related to coating, including tools, equipment and measuring devices

Required knowledge

- identification of hand application techniques
- the functions and safety requirements of hand and power tools, particularly in wet working environments
- characteristics of compounds, waxes and oils in terms of toxicity, reactivity, flammability, required viscosity
- the methods to prevent contamination of surfaces during and after finishing
- workflow in relation to the application of finishing material

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- On two occasions, one including a curved surface, enhance existing finishes by:
 - cutting down
 - pulling in
 - compounding and buffing
- On two occasions wax and oil to achieve a satin finish
- Maintain application equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Hand finishing application equipment, compounds, waxes and oils and finishes requiring enhancement.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time may be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment,

EVIDENCE GUIDE

materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the enhancement of finishes
Surfaces may include but are not limited to:	<ul style="list-style-type: none"> • solid timber • manufactured board • metal
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • abrasive papers • pulling/pullover rubber • cotton rags • steel wool • orbital sander pneumatic or low voltage • electric or pneumatic buff • rubber sanding block
Materials may include but are not limited to:	<ul style="list-style-type: none"> • water • detergent • cutting compound • wax • oil • buffing creams
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	Workplace procedures relating to the use and

RANGE STATEMENT

	<p>operation of tools and equipment</p> <p>Work instructions, including job sheets, plans, drawing and designs</p> <p>Workplace procedures relating to reporting and communication</p> <p>Manufacturers' specifications and operational procedures</p>
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Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFF3006B Repair and touch up surfaces

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to apply techniques to repair and touch up damaged surfaces.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Workplace information, including materials application and safety information, material safety data sheets, is used to inform work practices</p> <p>1.2. Characteristics of the surface and the required surface coating are identified from work orders or instructions</p> <p>1.3. Processing and application techniques, time and safety requirements are identified and used for work planning</p> <p>1.4. OHS requirements, including ventilation requirements and personal protection needs, are observed throughout the work</p> <p>1.5. Tools, equipment and accessories are identified and checked for safe and effective operation for the surface coating task</p>
2. Repair surfaces	<p>2.1. Surfaces are checked for contamination and correct preparation according to workplace procedures and standards</p> <p>2.2. Products with surface or other faults are identified and assessed</p> <p>2.3. Materials required for repair are selected and prepared</p> <p>2.4. Repairs are completed to manufacturers' standards and/or industry practices</p>
3. Prepare for application of materials	<p>3.1. Techniques for hand application of materials are identified and selected</p> <p>3.2. Coating materials required are identified and prepared for the surface coating task</p> <p>3.3. Trial applications of surface materials are made to check equipment operation, materials consistency and specified surface finish</p> <p>3.4. Faults are identified and workplace procedures for rectification are followed</p>
4. Apply surface coating	<p>4.1. Surface coatings are applied according to job instructions, material manufacturers' specifications and workplace procedures</p> <p>4.2. Coated products are inspected and approved for suitability for further processing</p> <p>4.3. Products which do not meet quality specifications are recoated or tagged for further investigation</p>

ELEMENT	PERFORMANCE CRITERIA
5. Clean work area and maintain equipment	5.1. Equipment used is cleaned and inspected for serviceable condition and stored appropriately 5.2. Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed 5.3. Work area, including painting locations, is cleaned and returned to approved condition 5.4. Workplace records are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to coating materials, cleaning materials, work orders and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the worksite and the obtaining of coating equipment and materials to avoid any back tracking, work flow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, estimate paint requirements and estimate material requirements
- use pre-checking and inspection techniques to anticipate coating problems, avoid re-working and wastage
- use the limited workplace technology related to coating including tools, equipment and measuring devices

Required knowledge

- repair and touch up techniques
- decontamination materials, techniques and safety requirements
- identification of application techniques
- characteristics of coatings and base materials in terms of toxicity, reactivity, flammability, required viscosity and re-coatability
- the methods to prevent contamination of surfaces during and after surface coating
- workflow in relation to the application of surface coatings

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Repair and finish a minimum of four damaged surfaces, including:
 - a strip off and re-finish
 - two touch ups involving different repair techniques
- with only one being a metal surface
- Maintain application equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Surface coating application equipment, coatings, other consumables, and materials to be repaired.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the application of surface coatings

Techniques are to include:

- decontamination and repair
- stripping
- wash off
- stoppings
- (epoxy
- button lac
- water putty
- wax)
- plugs and refinishing

Surface faults may include:

- machine marks
- bruising
- pencil marks
- grease
- cross-sanding marks
- scratches
- glue marks
- dirt marks
- insect and termite holes
- holes
- knots
- blisters

RANGE STATEMENT	
	<ul style="list-style-type: none"> • rubber marks • burns or tears • ropiness and foreign matter in the polish
Surfaces may include but are not limited to:	<ul style="list-style-type: none"> • solid timber • manufactured board • metal
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • brushes • rollers • soup rubbers • paint trays • power agitators • sanders • liquid containers • scrapers • quirk sticks • sandpapers • cotton rags • hessian • steel wool • sandpaper • abrasive papers
Materials to be applied may include but are not limited to:	<ul style="list-style-type: none"> • lacquers • paints • acrylics • enamels • one-pot polyurethane • methylated spirits • pigments • spirit colours
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFF3007B Apply graining and decorative finishes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to apply material to a surface to imitate timber grain and decorative (faux) finishes.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Workplace information, including materials application and safety information, material safety data sheets, is used to inform work practices</p> <p>1.2. Characteristics of the surface and the required surface treatment are identified from work orders or instructions</p> <p>1.3. Processing and application techniques, time and safety requirements are identified and used for work planning</p> <p>1.4. OHS requirements, including ventilation requirements and personal protection needs, are observed throughout the work</p> <p>1.5. Tools, equipment and accessories are identified and checked for safe and effective operation for the task</p>
2. Prepare for application of materials	<p>2.1. Surfaces are checked for contamination and correct preparation according to workplace procedures and standards</p> <p>2.2. Products with surface or other faults are identified and faults repaired as appropriate</p> <p>2.3. Materials required to complete the task are identified and prepared.</p> <p>2.4. Trial applications of material are made to check equipment operation, materials consistency, viscosity and sample match.</p> <p>2.5. Faults and or inconsistencies in colour and surface appearance are identified and workplace procedures for rectification and adjustment are followed</p>
3. Apply finishing materials	<p>3.1. Techniques for application of graining solution and other finishes are identified.</p> <p>3.2. Materials are applied according to job instructions, material manufacturer specifications and workplace procedures</p> <p>3.3. Finished products are inspected and approved for suitability for further processing</p> <p>3.4. Products which do not meet quality specifications are rectified or tagged for further investigation</p>
4. Clean work area and maintain equipment	<p>4.1. Equipment used is cleaned and inspected for serviceable condition and stored appropriately</p> <p>4.2. Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>4.3. Work area is cleaned and returned to approved condition, all areas used for bleaching are washed down with water.</p> <p>4.4. Workplace records are completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to coating materials, cleaning materials, work orders and safety procedures
- communicate ideas and information to convince customers of the appropriateness of particular products to their needs
- plan and organise activities including the preparation and layout of the worksite and the obtaining of coating equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate paint requirements and other material requirements
- use pre-checking and inspection techniques to anticipate coating problems, avoid re-working and wastage
- use the limited workplace technology related to coating, including tools, equipment and measuring devices

Required knowledge

- identification of application techniques
- characteristics of graining and coating materials in terms of toxicity, reactivity, flammability, viscosity
- the methods to prevent contamination of surfaces during and after processing
- workflow in relation to the application stains, fillers and bleaches

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Apply graining solution to imitate a minimum of two different timber species
- Apply graining solution to imitate a minimum of two different timber species
- Apply material to imitate a marble finish and one other finish type
- Maintain application equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Hand application equipment, graining solution and coating materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the application of surface coatings
<p>Graining and decorative finishes are to include:</p>	<ul style="list-style-type: none"> • graining and marbling; and may include: <ul style="list-style-type: none"> • ragging • stippling • ageing • distressing and others
<p>Surfaces may include but are not limited to:</p>	<ul style="list-style-type: none"> • solid timber • manufactured board • metal
<p>Tools and equipment may include, but are not limited to:</p>	<ul style="list-style-type: none"> • liquid containers • rubber gloves • face masks • spray booths • spray guns • compressor • air lines • brushes • sanding block • brushes • graining tools
<p>Materials to be applied may</p>	<ul style="list-style-type: none"> • water • abrasive papers

RANGE STATEMENT	
include but are not limited to:	<ul style="list-style-type: none"> • cotton rags • hessian • lacquer-based wiping stain • polyurethane wiping stain • spirit stain • pigment oil stain • proprietary brand stains • pigments • acrylic paint • enamel
Personal protective equipment includes:	<ul style="list-style-type: none"> • that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer recommendations for the use of equipment and materials

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFFF3008B Apply traditional French polishing techniques

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency involved in the hand application of shellac polish to timber surfaces using traditional techniques.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for work	1.1. Work requirements are correctly identified from drawings/specifications/instructions 1.2. Quality assurance requirements are recognised and adhered to in accordance with company's operation 1.3. OHS requirements, including personal protection needs, are observed throughout the work 1.4. Tools and equipment selected are consistent with job requirements and work instructions, checked for safety and serviceability and any faults reported to supervisor 1.5. Skinning in, bodying up and spiriting out/stiffening up rubbers are prepared consistent with the requirements of the work
2. Prepare for application of polish	2.1. Surfaces are checked for contamination and correct preparation according to workplace procedures and standards 2.2. Products with surface or other faults are identified and faults are reported or repaired 2.3. Techniques for hand application of polish using traditional methods are identified and used according to workplace procedures 2.4. Materials and equipment suitable for skinning in, bodying up and spiriting out/stiffening up operations are prepared 2.5. Surfaces are stained, filled in and then sealed with polish using a mop brush, blender or swooge
3. Skin in job surface	3.1. Surface is lightly sanded and checked for defects which are rectified in accordance with workplace procedures 3.2. Skinning in rubber is suitably charged with polish having regard for job colour and clarity 3.3. Surface is skinned in, covering small areas at a time, using correct amount of pressure and suitable rubber movements 3.4. Pumice powder is applied as necessary in accordance with workplace procedures 3.5. Skinned in surface is inspected and any defects are repaired using suitable materials
4. Body up a skinned in surface	4.1. Polish, lubricating oil and pumice powder is used to body up the skinned in surface, using correct amount

ELEMENT	PERFORMANCE CRITERIA
	<p>of pressure and suitable rubber movements</p> <p>4.2. Rubber and job surface are continuously monitored to evaluate their condition</p> <p>4.3. Body up rubber is recharged and lubricating oil and pumice are applied as necessary to ensure surface faults and blemishes do not develop</p> <p>4.4. Bodied up surface is full and flat with an even sheen and shows no blemishes</p>
5. Spirit off/stiffen up surface	<p>5.1. Surface is stiffened up/spirited off using correctly charged rubber, correct amount of pressure and suitable rubber movements</p> <p>5.2. Stiffened up/spirited off surface is free of oil, full, flat with an even sheen and shows no blemishes or rubber marks</p>
6. Clean up	<p>6.1. Workplace is cleared of debris and unused materials</p> <p>6.2. Rubbers are stored separately in airtight glass or plastic containers in accordance with workplace procedures</p> <p>6.3. Tools and equipment are cleaned, maintained and stored</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to French polishing techniques and materials, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate French polishing problems, avoid re-working and wastage
- use the workplace technology related to French polishing, including tools, equipment and measuring devices

Required knowledge

- workplace and equipment safety requirements, including relevant regulations, codes and standards
- construction techniques of rubbers
- safe handling of materials associated with traditional French polishing, including:
 - lac
 - polishes
 - paraffin and linseed oils
 - methylated spirits
- shellac mixing procedures
- repair techniques to defects in timber surfaces and polish film
- appropriate rubber charging and movements for each stage of French polishing
- storage requirements for lac products and rubbers

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Locate, interpret and apply information relevant to French polishing
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Accurately apply traditional French polishing techniques on a minimum of two occasions which must include and cover flat and curved surfaces and an enclosed panel
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Safe work area, French polishing materials, timber components/furnishings requiring polish and cleaning materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the process of French polishing
Polishes may include, but are not limited to:	<ul style="list-style-type: none"> • shellac • button lac • de-waxed lac • de-waxed/de-coloured lac • white or bleached lac.
Surfaces are to include:	<ul style="list-style-type: none"> • solid timber or veneered manufactured board
Lubricating oils may include:	<ul style="list-style-type: none"> • paraffin and linseed
Surface faults may include:	<ul style="list-style-type: none"> • machine marks • bruising • pencil marks • grease • cross-sanding marks • scratches • glue marks • dirt marks • insect and termite holes • holes • knots

RANGE STATEMENT	
	<ul style="list-style-type: none"> • blisters • rubber marks • burns or tears • ropiness and foreign matter in the polish.
Tools and equipment may include:	<ul style="list-style-type: none"> • filler blades • brushes • abrasive papers • skinning in • bodying up and spiriting out rubbers • mop brush • blender • swooge and scrapers
Personal protective equipment includes:	<ul style="list-style-type: none"> • that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Manufacturer specifications and operational procedures • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

Co-requisite units		

LMFFF3009B Set up, operate and maintain CNC coating systems

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up, operate and maintain CNC coating systems in order to apply coatings to specifications
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1.Characteristics of the surface and the required surface coating are identified from work orders or instructions 1.2.Processing and application techniques, time and safety requirements are identified and used for work planning 1.3.OHS requirements, including ventilation requirements and personal protection needs, are observed throughout the work 1.4.Tools, equipment and accessories are identified and checked for safe and effective operation for the surface coating task 1.5.Coating materials are identified and prepared
2. Check and prepare for spraying	2.1.Products with surface or other faults are identified and faults reported or repaired as appropriate 2.2.Other products and equipment in the workplace are protected from overspray 2.3.Trial applications of surface materials are made to check equipment operation, materials consistency and specified surface finish 2.4.Machine faults are identified and rectified or reported 2.5.Material faults are identified and workplace procedures for rectification are followed
3. Apply surface coating	3.1.Surfaces are kept free of contamination 3.2.Surface coatings are applied according to workplace procedures 3.3.Surface coating viscosity and coverage is monitored and checked against workplace requirements for even spread and thickness 3.4.Rectification of surface faults are made as required 3.5.Products are inspected and approved for suitability for further processing 3.6.Defects are dealt with and/or reported in accordance with workplace procedures
4. Clean work area and maintain equipment	4.1.Equipment is cleaned and inspected for serviceable condition and stored appropriately 4.2.Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed 4.3.Work area, including spray booth is cleaned and

ELEMENT	PERFORMANCE CRITERIA
	<p>returned to approved condition</p> <p>4.4. Workplace records are completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to coating system, coating materials, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate paint requirements and other material requirements
- use pre-checking and inspection techniques to anticipate coating problems, avoid reworking and avoid wastage
- use the workplace technology related to CNC coating systems, including machines, tools, equipment and measuring devices

Required knowledge

- identification of CNC coating system equipment, processes and procedures
- characteristics of the coatings and base materials in terms of toxicity, reactivity, flammability, required viscosity and re-coatability
- effects of the fumes, heat and other radiations on surface coatings
- the methods to prevent contamination of surfaces during and after surface coating
- workflow in relation to spraying operations

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Locate, interpret and apply information relevant to the materials being applied and the application equipment
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Select and apply surface coatings, including the adjustment of system controls to effect required coating using a minimum of two different CNC systems
- Maintain equipment and work area, including spray booth
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

CNC coating systems and equipment, spray booth, coatings and cleaning products.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate organisational abilities, judgement and problem solving skills in the application of surface coatings
Surface coating operations	<ul style="list-style-type: none"> • This unit covers work involved in the application of surface coatings by CNC coating systems • Surface coatings are to include: a minimum of two of those required for curtain coating, UV coating, tumbling, dipping and electrostatic powder coating tasks
Tools and equipment may include:	<ul style="list-style-type: none"> • computerised spray system • electrostatic spray guns • baking ovens • barrel tumblers • spray booths • liquid containers • compressor and hoses • screwdrivers • shifting spanner and spanners • ford cup
Materials to be applied may include but are not limited to:	<ul style="list-style-type: none"> • stains • lacquers • wax • oil

RANGE STATEMENT	
	<ul style="list-style-type: none"> • two-pack polyurethane • three-pack polyester • enamels • acrylics • powder coating
Personal protective equipment includes:	<ul style="list-style-type: none"> • that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Furniture Finishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFL1001A Complete simple floor covering installation

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor	This unit covers the competency required to complete installation of timber, carpet or resilient floor coverings in a simple context.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Pre-requisite Units	
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Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Lay out materials	1.1.Plans and/or drawings are read and interpreted 1.2.Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3.Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 1.4.Suitable adhesives, trims and accessories are selected if required 1.5.Materials are laid out to meet specification requirements and minimise waste and joins
2. Prepare materials for installation	2.1.Sequence of work is planned to ensure lay out and fixing is in logical order 2.2.Underlay is cut to specification 2.3.Materials are cut to shape, length and size for final laying 2.4.Adhesives and edge strips are prepared for use as required
3. Lay flooring	3.1.Instructions and sequence for laying and fixing are followed 3.2.Appropriate underlay is laid according to manufacturers' recommendations 3.3.Materials for fixing are organised and used in accordance with relevant safety management requirements 3.4.Fixing methods and equipment are used following manufacturers' recommendations 3.5.Finished job is inspected and any imperfections are rectified following workplace procedures
4. Complete housekeeping	4.1.Unused materials are stored or recycled as required 4.2.Tools and equipment are cleaned and stored appropriately 4.3.Work area is cleaned and rubbish disposed of appropriately 4.4.Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, estimate flooring requirements and other material requirements
- use pre-checking and inspection techniques to anticipate installation problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the installation including tools, equipment, calculators and measuring devices

Required knowledge

- the type, characteristics, uses and limitations of flooring materials
- the types and uses of installation tools and equipment
- the type, characteristics, uses and limitations of fixing methods and adhesives
- the type, characteristics, uses and limitations of underlays
- workplace safety system requirements related to flooring installation
- workflow in relation to flooring installation operations

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Interpret work order and locate and apply relevant information • Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment • Apply ventilation standards • Follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> • minimise the risk of injury to self and others • prevent damage to goods, equipment and products • maintain required production output and product quality • To complete a minimum of one simple floor covering installation, which may be either timber, carpet or resilient, or • Participate as a member of a supervised work team in the completion of an installation in a domestic or commercial setting • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
<p>Resource implications</p>	<p>Timber, carpet or resilient flooring materials; timber, carpet or resilient flooring tools and equipment, installation materials; and area requiring flooring.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant timber, carpet or resilient flooring installation equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Simple floor covering installation	This unit is to be satisfied by completing a simple floor covering project to satisfy an established design or participation as a member of a work team in the completion of a supervised installation in a domestic or commercial setting
Timber flooring may include:	<ul style="list-style-type: none"> • floating floor • strip timber flooring (non-structural) • parquetry and cork tiles
Carpet flooring may include:	<ul style="list-style-type: none"> • tufted carpet • woven carpet • needle punch carpet and fusion bonded carpe
Resilient flooring may include:	<ul style="list-style-type: none"> • homogenous/heterogeneous backed PVC • linoleum sheet • rubber sheet and composition vinyl
Unit context	<ul style="list-style-type: none"> • This unit is established for VET in Schools or equivalent program where the level of supervision is likely to be more direct than under normal working conditions • OH&S requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in installing floor coverings • Simple floor covering contexts include those where: <ul style="list-style-type: none"> • sub-floor preparations are not required or have been completed • the area to be covered is rectangular or square

RANGE STATEMENT	
	<ul style="list-style-type: none"> • no pattern, border design or colour matching is required
Tools and equipment for timber floor covering installation may include:	<ul style="list-style-type: none"> • drop saw • jig saw • hand saw • undercut saw • plunge saw • nail gun • straight edge • cramps • clamps • hammer • bar scribe • tape measure and utility knife
Tools and equipment for carpet floor covering installation may include:	<ul style="list-style-type: none"> • carpet knee kicker • power stretcher • carpet wall trimmer • trolley • hammer • trimming knife • spiked carpet roller • weight or seam roller • awl • carpet spreader • carpet shears • napping shears and tape measure
Tools and equipment for resilient floor covering installation may include:	<ul style="list-style-type: none"> • utility knife • straight edge • square • chalk and chalk-line • tape measure • hacksaw • serrated trowel • hammer • scribing bar • divider • roller • gas bottle and gun • rubber mallet • paint brush and bucket

RANGE STATEMENT	
	<ul style="list-style-type: none"> • spatula knife • trolley and wall trimmer
Materials may include but are not limited to:	<ul style="list-style-type: none"> • flooring materials • underlay • edge strips • reducing strips • tapes • adhesives • adhesive tapes • skirting • domestic carpet gripper strips • heat seam tape • hessian tape and thread
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturers' instructions for the use of equipment and materials

Unit Sector(s)

Unit Sector	Floor Covering and Finishing
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Co-requisite units

Co-requisite Units	
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Functional area

Functional Area	
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LMFFL2001A Use flooring technology sector hand and power tools

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use hand and power tools in applications relating to the flooring and finishing sector of the furnishing industry.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a production and trade worker level. These skills and knowledge are to be used at the production and trade worker levels.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hand and power tools	1.1. Applicable OHS, legislative and organisational requirements relevant to the use of flooring sector hand and power tools. are verified and complied with 1.2. Types of hand and power tools and their functions are identified from relevant information sources 1.3. Sources of power supply are recognised
2. Select hand tools	2.1. Hand tools are selected consistent with the needs of the job 2.2. Tools are checked for serviceability and safety and any faults are corrected or processed for repair 2.3. Equipment is selected to hold or support material for hand tool application where applicable
3. Use hand tools	3.1. Material is located and held in position for hand tool application 3.2. Hand tools are safely and effectively used according to their intended use 3.3. Hand tools are safely located when not in immediate use
4. Select power tools	4.1. Appropriate personal protective equipment is selected, correctly fitted and used 4.2. Power tools are selected consistent with the needs of the job in accordance with conventional work practice 4.3. Power tools are visually checked for serviceability/safety in accordance with OHS requirements and any faults are sent for repair 4.4. Equipment is selected to hold or support materials for power tool application where applicable
5. Use power tools	5.1. Material is located and held in position for power tool application where applicable 5.2. Power tools are safely and effectively used in application processes 5.3. Power tools are safely located when not in use
6. Clean up work area and tools	6.1. All tools are cleaned, maintained and stored 6.2. Equipment is cleaned, maintained and stored 6.3. Work area is cleared and waste removed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of faults and problems
- collect and understand information related to the use and maintenance of hand and power tools
- work with others and in a team by recognizing dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate flooring sector hand and power tool malfunctions or misuse to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organize activities, including the preparation and layout of the worksite and the obtaining of tools
- use mathematical ideas and techniques to correctly complete measurements and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use workplace technology related to the use and operator maintenance of hand and power tools and associated materials

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to preparing and presenting design information relevant to the use of hand and power tools
- organisational and site standards, requirements, policies and procedures for preparing and presenting design information for the use of hand and power tools
- types of hand and power tools and procedures for their safe use, operation and maintenance
- function, purpose and operator maintenance requirements of hand tools used in the furnishing technology workplace
- function, purpose and operator maintenance requirements of power tools used in

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <p>the furnishing technology workplace</p> <ul style="list-style-type: none">• environmental protection requirements• established communication channels and protocols• problem identification and resolution |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Apply safe handling practices for equipment, products and materials
- Adopt and carry out correct procedures prior to and during use of the hand and power tools prescribed above in the Range Statement
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Apply sector hand and power tools correctly and safely
- Complete operator maintenance on sector hand and power tools
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - a range of hand and power tools relevant to the sector(s)
 - access to manufacturer/user instructions and/or manuals
- Assessment may be in conjunction with any other technical unit requiring the use of hand and power tools

EVIDENCE GUIDE**Method of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Flooring (preparation) sector hand and power tools

- are to include angle grinder, scrapers, skutch hammers and chisels, bolsters, hand brushes and brooms, vacuum cleaners, hand trowels, smoothing trowels, spikey roller, spike shoes, carborundum stone, spatulas, gauging tools,

RANGE STATEMENT	
	screed bar, laser levels, string lines, drills, mixing paddles, batching buckets, moisture meters and material pumps
Flooring (carpet) sector hand and power tools	<ul style="list-style-type: none"> are to include utility knife, carpet knee kicker, power stretcher, carpet wall trimmer, carpet stair tool, trolley, hammer, trimming knife, heat seam iron, spiked carpet roller, weight or seam roller, awl, carpet spreader, carpet shears, napping shears, loop pile cutter, moulding lifter and sewing needle
Flooring (resilient) sector hand and power tools	<ul style="list-style-type: none"> are to include utility knife, straight edge, square, chalk and chalk-line, tape measure, hacksaw, serrated trowel, hammer, edge trimmer, recess scribe and pre-formed linoleum recess scribes, scribing bar, grooving tool, straight edge, divider, roller, gas bottle and gun, rubber mallet, paint brush and bucket, spatula knife, trolley, liquid seam sealer, seam sealer applicator, wall trimmer, hot air welding gun, furling iron and trolley
Flooring (timber) sector hand and power tools	<ul style="list-style-type: none"> are to include hammer, compressor, staple gun, bar scribe, utility knife, straight edge, drill, hand saw, chisels, drop saw, nail gun, secret nails, planer, circular saw and combination saw
Relevant information sources	<ul style="list-style-type: none"> Hand and power tool manufacturer specifications and operational procedures Workplace procedures relating to OHS, tool handling and operation, reporting and communication Work instructions, including job sheets, plans, drawings and designs
Sources of power supply	<ul style="list-style-type: none"> may be single or three phase
Fault reporting	In the operation of hand and power tools fault reporting may be verbal or written
Personal protective equipment	<ul style="list-style-type: none"> is to include that prescribed under legislation, regulation and enterprise policies and practices

Unit Sector(s)

Unit sector	Flooring technology
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Competency field

Competency field	General
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Co-requisite units

Co-requisite units		

LMFFL2002A Receive and prepare floor covering materials for installation

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcome required to plan, prepare, package, protect, transport and load floor covering materials to an installation site with minimum damage to floor coverings and components.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to a work room and an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify preparation requirements	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to receiving, preparing, packaging, protecting, transporting, loading and storage of floor coverings are verified and complied with</p> <p>1.2. <i>Floor Covering materials</i> to be prepared are identified against work orders</p> <p>1.3. <i>Instructions</i>, work plans and product information are read and interpreted to identify the preparation process required to complete work tasks</p> <p>1.4. Details of the site conditions, including safety and security requirements, are confirmed from reports or physical inspection</p> <p>1.5. Delivery point, access and storage on site are identified and methods for loading/hoisting floor coverings are determined</p> <p>1.6. Size, shape and special packaging requirements are determined for transportation to site</p> <p>1.7. <i>Tools, equipment</i> and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p>
2. Receive flooring materials	<p>2.1. Flooring materials are received and segregated into products</p> <p>2.2. Received materials are checked against delivery documentation for type and quantity</p> <p>2.3. Received materials are inspected for defects and damage and unacceptable items rejected or segregated</p> <p>2.4. Receipt documentation is completed to enterprise procedures</p>
3. Prepare and package floor coverings	<p>3.1. Types and quantities of materials required for the work plan are confirmed</p> <p>3.2. Floor coverings are laid out, measured and cut to required size</p> <p>3.3. Floor coverings and accessory products are packaged ready for transport to site taking into account <i>potential damage factors</i></p>
4. Load floor coverings on to the worksite	<p>4.1. Roles and related responsibilities for the successful completion of the loading and lifting activity are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>identified and applied</p> <p>4.2. Time requirements to complete the loading/lifting of floor coverings are estimated</p> <p>4.3. <i>Materials handling equipment</i> appropriate to the task is selected, accessed and used in accordance with regulatory and/or site requirements</p> <p>4.4. Labour requirements to support the floor covering loading/lifting requirements are confirmed and accessed</p> <p>4.5. Movement activities are completed as an individual or working directly with others as required by the work tasks</p>
5. Store floor coverings and accessories on site	<p>5.1. Condition of floor coverings, and accessory products is observed on arrival on site and any damaged product is identified and separated for further action</p> <p>5.2. Floor coverings and accessory products are stored on site observing any requirements for protection from potential damage factors</p> <p>5.3. Product and site <i>acclimatisation</i> requirements are identified and satisfied</p> <p>5.4. Materials are stacked appropriately for weight loading, size and crush-ability of floor coverings or accessory products</p> <p>5.5. Products are located to enable ready access when required on site</p> <p>5.6. Work is undertaken in accordance with workplace procedures</p>
6. Complete housekeeping	<p>6.1. Packing materials are stored or recycled as required</p> <p>6.2. Tools and equipment are cleaned and stored appropriately</p> <p>6.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>6.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems preparing, moving and storing materials to avoid re-working and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - floor covering materials preparation requirements and techniques
- seek learning opportunities
- use the limited workplace technology related to the moving and storing of materials including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to handling, transporting and storage of flooring materials
- potential damage factors
- organisational and site standards, requirements, policies and procedures for handling, transporting and storage of flooring materials
- characteristics of materials, products and common defects
- workflow in relation to use of goods and materials in store
- requirements for minimising damage to and maintaining contaminant free

REQUIRED SKILLS AND KNOWLEDGE

- unfinished materials goods and completed products
- potential hazards including fire and explosion risk, security issues and operator safety around products to be stored
- types of tools and equipment and procedures for their safe use, operation and maintenance
- set up and operation of loading/lifting equipment
- appropriate controls and safety equipment to manage risk
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- requirements of working with others in a team
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for receiving, preparing, moving and storing flooring materials
- Locate, interpret and apply information relevant to the requirements of the floor coverings to be prepared and stored
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to materials and equipment
 - maintain required production output and product quality
- Prepare, package, protect, transport and load floor coverings and plan layout of storage areas taking into account potential damage factors
- Establish and maintain storage areas for floor covering materials
- Use a range of non-regulated materials handling devices
- Modify activities to cater for variations in workplace contexts and environment
- Work effectively with others

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • a realistic requirement to receive, prepare, package, move and store floor coverings and associated materials • workplace location or simulated workplace • materials and equipment relevant to the preparation of floor coverings • a range of non-regulated materials handling devices • material specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Floor covering materials

- may include underlays, carpets, resilient, timber and cork products and non-perishable inventory required to support installation operations

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • may include but are not limited to pre-fabricated and fixed shelving, open and enclosed pallets, shipping containers, non-motorised lifting and movement aids and other material handling equipment
Potential damage factors	<ul style="list-style-type: none"> • may include humidity, moisture, temperature, weather effects, handling, crushing, scratching and contamination
Materials handling equipment	<ul style="list-style-type: none"> • covered by this unit is restricted to non-regulated machines and appliances
Acclimatisation	<ul style="list-style-type: none"> • onsite is required to ensure that material being installed is installed whilst at the same temperature and humidity as the area being covered so that the fitted material does not subsequently shrink or stretch from its fitted form

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFL2003A Select, operate and maintain floor covering cutting machine

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to operate and maintain cutting machine equipment in applications relating to the preparation of floor coverings in a workroom.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of sub-floor preparation operations. The competency applies to an off-site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the use of cutting equipment, are verified and complied with 1.2. <i>Types of cutting equipment</i> and their functions are identified from <i>relevant information sources</i> 1.3. <i>Sources of power supply</i> are recognised
2. Start-up checks on cutting equipment are conducted	2.1. Cutting equipment and <i>attachments</i> are selected consistent with the needs of the job 2.2. Cutting equipment is checked for serviceability and safety and any <i>faults</i> are correct or processed for repair
3. Prepare to cut floor coverings	3.1. Appropriate <i>personal protective equipment</i> is selected, correctly fitted and used 3.2. Load the roll of floor covering on to the cutting machine 3.3. Preparing to measure the floor covering 3.4. Programming the counter to make the cut.
4. Cut floor coverings	4.1. <i>Work sequence</i> and starting point are selected 4.2. Rolling up the floor coverings 4.3. Cutting the floor coverings 4.4. Wrapping the floor coverings 4.5. Remove roll of floor coverings from the cutting machine
5. Clean up work area and tools	5.1. All tools are cleaned, maintained and stored 5.2. Equipment is cleaned, maintained and stored 5.3. Work area is cleared and waste removed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of faults and problems
- collect and understand information related to the use and maintenance of floor covering cutting equipment
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems when operating and maintaining floor covering cutting machines to avoid rework and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organize activities including the preparation and layout of the worksite and the obtaining of tools
- use mathematical ideas and techniques to correctly complete measurements and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- Seek learning opportunities
- Use workplace technology related to the use and operator maintenance of floor covering cutting machines and associated materials

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the use of floor covering cutting equipment
- Standards including AS/NZS 2455 and AS 1884 (1985)
- organisational and site standards, requirements, policies and procedures for the use of floor covering cutting equipment
- types of floor covering cutting machines and procedures for their safe use, operation and maintenance
- floor covering cutting machine attachments, their uses, limitations and maintenance requirements
- environmental protection requirements

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• established communication channels and protocols• problem identification and resolution |
|--|

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for operating and maintaining floor covering cutting equipment
- Apply safe handling practices for equipment, products and materials
- Adopt and carry out correct procedures prior to and during use of the cutting equipment prescribed above in the Range Statement
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Cut resilient and carpet floor coverings using 'cut and roll' floor covering cutting machines to manufacturer specification and enterprise requirements.
- Complete operator maintenance on floor covering cutting equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - access to a floor covering cutting machine
 - access to manufacturer/user instructions and/or

EVIDENCE GUIDE	
	<p>manuals</p> <ul style="list-style-type: none"> • floor covering material required to be cut
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other related units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Types of cutting equipment	<ul style="list-style-type: none"> are to include 'cut and roll' floor covering cutting machines
Relevant information sources	<ul style="list-style-type: none"> Cutting machine manufacturer specifications and operational procedures Workplace procedures relating to ohs, tool

RANGE STATEMENT	
	handling and operation, reporting and communication <ul style="list-style-type: none"> • Work instructions, including job sheets, plans, drawings and designs
Sources of power supply	<ul style="list-style-type: none"> • electric and pneumatic
Attachments	<ul style="list-style-type: none"> • may include computer-aided software
Fault reporting	<ul style="list-style-type: none"> • in the operation of cutting equipment may be verbal or written
Personal protective equipment	<ul style="list-style-type: none"> • is to include that prescribed under legislation, regulation and enterprise policies and practices
Work sequence	<ul style="list-style-type: none"> • is likely to include start up procedures, • is likely to cover inspect, select equipment and accessories, clean sub-floor, smoothing, cleaning and rework
Standards	<ul style="list-style-type: none"> • AS/NZS 2455 and AS 1884 (1985)

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Resilient and Carpet
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Co-requisite units

Co-requisite units		

LMFFL2004A Moisture test timber and concrete floors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to moisture test and formally report on the condition of timber and concrete floors.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade and trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to moisture testing timber and concrete are verified and complied with</p> <p>1.2. Customer enquiry and <i>relevant information</i> is consulted to determine the type of proposed flooring operation and other work requirements</p> <p>1.3. Moisture content requirements for the proposed flooring are determined from manufacturer or workplace information</p> <p>1.4. <i>Tools, equipment</i> and required <i>materials</i> are obtained and prepared for the work</p>
2. Conduct moisture testing on timber flooring and components	<p>2.1. The type of floor construction materials and the building floor structure and substructure are identified</p> <p>2.2. <i>Timber flooring is visually inspected</i> to identify irregularities in moisture content.</p> <p>2.3. Ventilation flow is confirmed and irregularities noted</p> <p>2.4. Floor joists, bearers and stumps are visually checked for moisture content irregularities</p> <p>2.5. Moisture testing of timber flooring, floor joists, bearers and stumps EMC is completed in accordance with the approved process and standard</p>
3. Conduct moisture testing on concrete floors	<p>3.1. The type of floor construction materials and the building floor structure and substructure are identified</p> <p>3.2. <i>Concrete floor is visually inspected</i> to identify irregularities in moisture content.</p> <p>3.3. Moisture testing is completed in accordance with the approved process and Australian standard</p>
4. Notify findings of moisture tests	<p>4.1. <i>Notification</i> of the findings of the moisture tests is completed in accordance with the current and relevant Australian standards</p> <p>4.2. Copies of the notification are sent to appropriate personnel and suitably filed following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Collect, organise and understand information related to work orders, plans and safety procedures
- Communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of moisture testing outcomes and problems
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- Use pre-checking and inspection techniques to anticipate moisture testing problems to avoid re-work and wastage
- Diagnose and identify the causes and consequences of moisture irregularities
- Recognise and respond to circumstances outside instructions or personal competence
- Plan and organise activities, including the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- Clarify and confirm work instructions
- Plan work within given task parameters
- Accept responsibility for given tasks
- Set, monitor and satisfy personal work goals
- Satisfy the competency requirements for the job
- Maintain current knowledge of:
 - moisture testing equipment and processes
 - timber and concrete materials
- seek learning opportunities
- use the workplace technology related to the moisture testing of timber and concrete including tools, equipment, calculators and measuring devices.

Required knowledge

- workplace safety system requirements related to moisture testing timber and concrete
- type, characteristics and moisture content of:
 - timber sub-floor structures
 - concrete sub-floor structures
- types and uses of moisture testing equipment and procedures for their safe use, operation and maintenance
- requirements for moisture content of selected timber flooring components

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• characteristics and requirements of sub-floor moisture testing work flow in relation to moisture testing processes and procedures |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for sub-floor inspection
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of:
 - one electrical resistance moisture test on timber flooring, floor joists, bearers and stumps including written notification of the test results
 - one hygrometer moisture test on, concrete flooring including written notification of test results
 - one capacitance moisture test on, concrete flooring including written notification of test results
 - one calcium chloride test on, concrete flooring including written notification of test results
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • testing equipment, tools and materials relevant to moisture testing • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other related units of competency, e.g. Plan and cost flooring technology work</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Relevant information	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of moisture testing tools and equipment Workplace instructions, including job sheets, plans, drawings and designs

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Workplace procedures relating to notification and communications • Manufacturer instructions for the use of moisture testing equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • are to include electrical resistance meter, timber probe, tape measure, hygrometer, thermometer probe, temperature gauge, relative humidity, electric drill and masonry drill bits
Materials	<ul style="list-style-type: none"> • may include timber strip flooring, construction sheet flooring, concrete floors, above grade, on grade and below grade floors
Timber moisture tests	<ul style="list-style-type: none"> • are to include tests for moisture content, of timber flooring, floor joists, bearers and stumps rotting, insect attack and cross flow ventilation
Concrete moisture tests	<ul style="list-style-type: none"> • are to include checks for moisture, damage to expansion joint, concrete surface for weakness or damage and for the presence of curing agents
Inspection notifications	<ul style="list-style-type: none"> • are to cover the type and number of moisture test completed, inspection findings, suggested remedies to any faults identified and recommendations for the selected flooring

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber flooring
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Co-requisite units

Co-requisite units		

LMFFL2101A Remove existing floor coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to remove existing floor coverings.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan work	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to floor covering removal are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.4. Sequence of work is planned to ensure removal of floor coverings is in logical order</p> <p>1.5. Material and equipment are prepared and positioned for use</p>
2. Remove floor coverings	<p>2.1. Starting point is selected to ensure entry and exit access throughout the operation</p> <p>2.2. First section of <i>floor covering</i> is removed</p> <p>2.3. Removed floor coverings are securely packaged in manageable bundles for removal from the area</p> <p>2.4. Remaining floor covering is progressively removed</p> <p>2.5. Exposed floor is checked, and any protruding nails, carpet grippers, adhesives, levelling compounds and remnants of floor covering are removed</p>
3. Complete housekeeping	<p>3.1. Unused materials are stored or recycled as required</p> <p>3.2. Tools and equipment are cleaned and stored appropriately</p> <p>3.3. Removed floor coverings are <i>disposed of safely</i></p> <p>3.4. Work area is cleaned and rubbish disposed of appropriately</p> <p>3.5. Workplace documentation/reporting is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- anticipate floor covering removal problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organize activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the removal of floor coverings including tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to removing floor coverings
- organisational and site standards, requirements, policies and procedures for removing existing floor coverings
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• characteristics of materials, products and defects• set up and operation of equipment• procedures for the recording, reporting and maintenance of workplace records and information• characteristics and techniques of fixing floor coverings• the correct use of equipment, processes and procedures to remove floor coverings• workplace safety system requirements related to removing floor coverings• work flow in relation to removing floor coverings |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the removal of floor coverings
- Interpret work order and locate relevant information
- Identify safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Remove at least one of each of the following floor coverings:
 - carpet with soft underlay and gripper strips
 - parquetry with hard underlay
 - resilient floor covering installed on concrete
 - carpet, resilient and cork tile
 - adhesive bonded carpet
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - specifications and work instructions
 - materials and equipment relevant to removing existing floor coverings

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of

EVIDENCE GUIDE

workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting

RANGE STATEMENT	
	and communication <ul style="list-style-type: none"> • Manufacturer instructions for the use of equipment and materials
Tools and Equipment	Tools and equipment are to include hammer, moulding lifter, scraper, utility knife, vacuum cleaner, vinyl tile lifter, floor stripper, adhesive tape, twine, rubbish bags
Floor Coverings	Floor coverings to be removed may include but are not limited to carpet and carpet tiles, hard and soft underlay, resilient sheet and tiles, parquetry, strip timber, floating floor and cork tiles
Disposed of safely	Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organization insurance requirements

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Floor Preparation
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Co-requisite units

Co-requisite units	

LMFFL2102A Prepare, select and apply smoothing and patching compounds

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to prepare, select and apply cementitious products using smoothing and skim coating techniques to concrete and timber sub-floors in readiness for the installation of floor coverings and coatings for internal and external applications.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to selecting and applying smoothing and patching compounds for sub-floor preparation are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. Floors are inspected to ensure that they are dry, smooth, plane, sound and clean in accordance with ASNZS 2455.1 (1995) and AS 1884 (1995) and the extent of preparation is confirmed</p> <p>1.4. Trial applications of surface materials are made to determine the suitability of the primer to the sub-floor, and the appropriateness of the smoothing compound to smoothing requirements and compatibility to the primer and sub-floor application</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Material safety data sheets, or equivalent, are read and applied during the work</p> <p>1.7. Materials and equipment are prepared and positioned for use</p> <p>1.8. Surfaces are cleaned in accordance with manufacturers recommendations</p>
2. Apply levelling compounds and primers	<p>2.1. Surface coating is applied with the depth and coverage in accordance with manufacturer specifications and job requirements</p> <p>2.2. Levelled floor is checked and cleared for further processing</p>
3. Apply levelling compounds and primers to timber sub-floors	<p>3.1. Surfaces are checked for contamination, moisture content and suitable preparation</p> <p>3.2. Material safety data sheets, or equivalent, are read and applied during the work</p> <p>3.3. A mixing station is established where materials and equipment are prepared and positioned for use</p> <p>3.4. Trial applications of surface materials are made to check equipment operation, materials consistency and specified surface finish</p> <p>3.5. Levelled floor is checked and cleared for further processing</p>

ELEMENT	PERFORMANCE CRITERIA
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriate 4.4. Workplace documentation and/or reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate concrete sub-floor preparation problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - sub-floor patching and smoothing techniques
- seek learning opportunities
- use the limited workplace technology related to the preparation of a concrete and timber sub-floor including tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to floor patching and smoothing techniques
- organisation and site standards, requirements, policies and procedures for applying smoothing and patching compounds
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

maintenance

- characteristics of materials, products and defects
- set up and operation of equipment
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- characteristics and requirements of concrete and timber sub-floor preparation
- type, characteristics, uses and limitations of smoothing compounds and primers
- workplace safety system requirements related to the application of smoothing compounds and primers

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- To complete to Australian Standards a minimum of two sub-floor preparations which are to include:
 - a patch and repair
 - a level pour
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to sub-floor smoothing and patching activities
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of

EVIDENCE GUIDE

	<p>workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting

RANGE STATEMENT	
	and communication <ul style="list-style-type: none"> • Manufacturer instructions for the use of equipment and materials
Surface materials	<ul style="list-style-type: none"> • may be compounds used to repair, level, smooth or skim a sub-floor of timber or concrete
Tools, equipment	<ul style="list-style-type: none"> • may include but is not limited to finishing trowel, grouping and batching buckets, mixing palette, hair broom, trolley, plastic sheeting, mixing drill and screed bar

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Floor Preparation
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Co-requisite units

Co-requisite units	

LMFFL2103A Select and apply appropriate compounds and additives

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to select and apply appropriate compounds and additives to sub-floors in preparation for the installation of floor coverings.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of sub-floor preparation operations. The competency applies to an on-site environment and involves application of skills and knowledge at a sub-trade and trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify the subfloor properties	1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the use of <i>appropriate compounds and additives</i> , are verified and complied with 1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks 1.3. Appropriate <i>personal protective equipment</i> is selected, correctly fitted and used 1.4. The type of floor/wall construction and the building floor/wall structure and sub-structure are identified 1.5. Datum lines are run and checked to confirm dimensions 1.6. Timber and/or concrete flooring inspections are completed to identify irregularities 1.7. Wall inspections are completed to identify irregularities
2. Select appropriate compounds and additives	2.1. Types of floor and wall preparation compounds and additives and their functions are identified from relevant information sources 2.2. Sub-floors/walls are checked for contamination, moisture content, plane, smooth and suitable preparation 2.3. Suitable compounds and additives are selected consistent with the needs of the job
3. Prepare compounds and additives	3.1. <i>Tools, equipment and materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 3.2. Selected compounds and additives for application are organised and prepared in accordance with relevant safety management requirements 3.3. The method of application is selected 3.4. Sequence of work is planned to ensure the application of appropriate compounds and additives is in logical order
4. Apply compounds and additives	4.1. Working lines are established and starting point is selected 4.2. Mixing station is established and selected compounds and additives are mixed to manufacturer instructions

ELEMENT	PERFORMANCE CRITERIA
	4.3. Selected compounds and additives are applied to the sub-floor surface following manufacturer instructions 4.4. Sub-floors are inspected and reworked as required
5. Clean up work area and tools	5.1. All tools are cleaned, maintained and stored 5.2. Equipment is cleaned, maintained and stored 5.3. Work area is cleared and waste removed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems, avoid re-working and avoid wastage of selected compounds and additives
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate compound and additives requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - types and applications of compounds and additives
- seek learning opportunities
- use the limited workplace technology related to the application of compounds and additives including tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to appropriate compounds and additives
- organisation and site standards, requirements, policies and procedures for applying appropriate compounds and additives
- characteristics and requirements of concrete and timber sub-floor preparation
- characteristics and requirements of concrete and fibre board wall preparation
- types, characteristics, uses and limitations of compounds and additives
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

maintenance

- set up and operation of equipment
- workplace safety system requirements related to the application of appropriate compounds and additives
- appropriate mathematical procedures for estimation and measurement
- problem identification and resolution techniques
- environmental protection requirements
- established communication channels and protocols
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to the building structures and to equipment
 - select the correct compound or additive for the job
 - identify and respond to product incompatibilities
- Complete a minimum of three applications where appropriate compounds and additives are selected, prepared and applied to substrates in preparation for finish coverings
- Modify activities to cater for variations in workplace context and environment
- Work effectively with others

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - realistic application requirements
 - workplace location or simulated workplace
 - materials and equipment relevant to the application of compounds and additives
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment

EVIDENCE GUIDE

guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Appropriate compounds and additives

- may include preparation primers, self-smoothing/levelling cements, pumpable cement base floor leveller, two part, chemically cured epoxy coating for porous concrete floors, rapid setting and drying repair

RANGE STATEMENT	
	mortar, latex powder and emulsion based sub-floor smoothing compounds, synthetic resin dispersion and high polymer cement based finishes
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer instructions for the use of equipment and materials
Personal protective equipment	<ul style="list-style-type: none"> • is to include that prescribed under legislation, regulation and enterprise policies and practices
Tools and equipment	<ul style="list-style-type: none"> • may include utility knife, straight edge, square, tape measure, spirit level, screed bar, gauging tool, finishing trowel, corner trowel, spatula, rollers, brushes, measuring buckets, batching buckets, mixing drill, mixing paddle and trolley
Materials	<ul style="list-style-type: none"> • are to include but are not limited to sanding paper, grinding discs, carborundum brick, smoothing and repairing compounds and primers

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Floor Preparation
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Co-requisite units

Co-requisite units		

LMFFL2104A Prepare concrete sub-floors using wet cleaning methods

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to wet clean concrete sub-floors using high and low pressure water cleaning applications relating to sub-floor preparation.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of sub-floor preparation operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify wet cleaning operations	1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the application of wet cleaning <i>methods</i> , are verified and complied with 1.2. Types of <i>wet cleaning equipment</i> and their functions are identified from <i>relevant information sources</i> 1.3. <i>Sources of power supply</i> are recognised
2. Select wet cleaning method	2.1. Wet cleaning method, equipment and <i>attachments</i> are selected consistent with the needs of the job 2.2. Wet cleaning equipment is checked for serviceability and safety and any <i>faults</i> are corrected or processed for repair 2.3. Sequence of work is planned to ensure efficiency and quality of sub-floor cleaning
3. Prepare sub-floor for cleaning	3.1. Appropriate <i>personal protective equipment</i> is selected, correctly fitted and used 3.2. <i>Fittings and fixtures</i> are removed from the sub-floor 3.3. Sub-floor is cleared of loose debris and dirt and cleaned 3.4. A safe flooring technology work environment is established and maintained
4. Clean the floor	4.1. The start point is established and work plan implemented 4.2. Perimeter is cleaned using appropriate method and equipments. 4.3. Main area is cleaned to the required <i>standard</i> using the most appropriate available equipment in accordance with the manufacturer specification 4.4. Floor area is inspected and reworked as required
5. Clean up work area and tools	5.1. All tools are cleaned, maintained and stored 5.2. Equipment is cleaned, maintained and stored 5.3. Work area is cleared and waste removed 5.4. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of faults and problems
- collect and understand information related to the use of wet cleaning methods and the maintenance of high and low water pressure equipment
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems associated with wet cleaning to avoid rework and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organize activities including the preparation and layout of the worksite and the obtaining of tools
- use mathematical ideas and techniques to correctly complete measurements and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use workplace technology related to the use of wet cleaning methods and operator maintenance of equipment and associated materials

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the use of wet cleaning methods
- Standards including AS/NZS 2455 and AS 1884 (1985)
- organisational and site standards, requirements, policies and procedures for the use of wet cleaning methods
- types and characteristics of high and low water pressure including requirements for their safe use, operation and maintenance
- high and low water pressure equipment attachments, their uses, limitations and maintenance requirements
- environmental protection requirements

REQUIRED SKILLS AND KNOWLEDGE

- | |
|--|
| <ul style="list-style-type: none">• established communication channels and protocols• problem identification and resolution |
|--|

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for operating and maintaining wet cleaning equipment
- Apply safe handling practices for equipment, products and materials
- Adopt and carry out correct procedures prior to and during the application of each of the following wet cleaning methods:
 - high and low water pressure cleaning
 - detergent cleaning
 - acid etching
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, tools, equipment or products
 - minimise the risk of injury to self or others
- Complete operator maintenance on wet cleaning high and low water pressure equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - a realistic cleaning requirement
 - workplace location or simulated workplace
 - access to high and low pressure wet cleaning

EVIDENCE GUIDE	
	<p>equipment.</p> <ul style="list-style-type: none"> access to manufacturer/user instructions and/or manuals
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other related units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but are not limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Wet cleaning methods	<ul style="list-style-type: none"> may include high and low pressure water-hosing, detergent cleaning and acid etching
Types of wet cleaning equipment	<ul style="list-style-type: none"> may include but are not limited to low pressure sprayer, booster pump, air

RANGE STATEMENT	
	compressor, hand held lance, plastic sprinkling can, mop, stiff broom, floor scrubber, disc machine equipment with abrasive bristle brushes, power washer, suitable nozzle tips, pressure rated hoses, wet/dry vacuum, squeegee, runoff protection.
Relevant information sources	<ul style="list-style-type: none"> • Manufacturer specifications and operational procedures for wet cleaning high and low water pressure, detergent cleaning and acid etching equipment • Workplace procedures relating to ohs, tool handling and operation, reporting and communication • Work instructions, including job sheets, plans, drawings and designs
Sources of power supply	<ul style="list-style-type: none"> • may be single or 3-phase • propane
Attachments	<ul style="list-style-type: none"> • are to include wet/dry vacuum attachment suitable nozzle tips, run off protection
Fault reporting	<ul style="list-style-type: none"> • is to cover any faults in the operation of wet cleaning equipment • reporting may be verbal or written
Personal protective equipment	<ul style="list-style-type: none"> • is to include that prescribed under legislation, regulation and enterprise policies and practices
Fittings and fixtures	<ul style="list-style-type: none"> • include nails, door stops, gripper strips, metal mouldings and debris
Work sequence	<ul style="list-style-type: none"> • is likely to cover inspect, select equipment and accessories, clean sub-floor, wet cleaning, remove standing water, dispose of solid debris, slurry, and rework
Standards	<ul style="list-style-type: none"> • AS/NZS 2455 and AS 1884 (1985)

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Floor Preparation
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Co-requisite units

Co-requisite units	

LMFFL2105A Select, prepare and apply moisture barriers and damp proof membranes to concrete sub-floors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to prepare concrete sub-floors to apply moisture barriers and damp proof membranes in readiness for the installation of floor coverings and coatings.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to moisture barriers and damp proof membranes are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. Sub-floors are inspected in accordance with AS/NZS 2455.1 (1995) and AS 1884 (1995) and the treatment system is identified</p> <p>1.4. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.5. Material safety data sheets, or equivalent, are read and applied during work</p> <p>1.6. Materials and equipment are prepared and positioned for use</p> <p>1.7. Surfaces are cleaned in accordance with manufacturer recommendations</p>
2. Apply moisture suppressant	<p>2.1. Surface coating is applied with the depth and coverage in accordance with manufacturer specifications and job requirements</p> <p>2.2. Sub-floor is checked and cleared for further processing</p>
3. Apply moisture barrier	<p>3.1. Establish whether the moisture is hydrostatic pressure, capillary moisture, or new concrete with high moisture content</p> <p>3.2. Establish whether moisture content is reducing, is construction moisture or is result of damaged membrane or capillary action</p> <p>3.3. Strengthen all corners, cracks and other penetrations</p> <p>3.4. Layer barrier material in accordance with manufacturer instructions</p> <p>3.5. Apply second coating as required</p> <p>3.6. Sub-floor is checked and cleared for further processing</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate concrete sub-floor preparation problems, avoid re-working and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the selection, preparation and application of moisture barriers and damp proof membranes to concrete sub-floors including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to moisture suppressants and barrier systems
- organisational and site standards, requirements, policies and procedures for moisture suppressant and barrier systems
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and establish safe practices and procedures for preparing and applying moisture barriers
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Complete a minimum of two moisture suppressant/barrier preparations which are to include:
 - a hydrostatic and a capillary moisture problem to Australian standards
 - modify activities to cater for variations in workplace context and environment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to moisture suppressant/barrier activities
 - specifications and work instructions

EVIDENCE GUIDE

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Instructions

- Workplace procedures relating to the use and operation of tools and equipment
- Workplace instructions, including job sheets, plans, drawings and designs
- Workplace procedures relating to reporting

RANGE STATEMENT	
	and communication <ul style="list-style-type: none"> • Manufacturer instructions for the use of equipment and materials
Treatment system	<ul style="list-style-type: none"> • may be one of two moisture treatments, a Construction Moisture Suppressant System or a Moisture Barrier. The Moisture Suppressant System is designed for new concrete with low moisture content or capillary moisture. The Moisture Barrier is designed for concrete with hydrostatic pressure, capillary moisture or new concrete with a high moisture content

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Floor Preparation
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Co-requisite units

Co-requisite units		

LMFFL2106A Prepare walls for coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to clean and prepare walls to smooth flat surface in preparation for resilient wall coverings and coatings.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to wall preparation for coverings on wall substrate are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. The condition of the walls are assessed to prepare walls to a smooth flat surface, the extent of preparation required is confirmed</p> <p>1.4. Suitable primers smoothing and repairing compounds are selected</p> <p>1.5. Surfaces are checked for contamination, moisture content, plane, smooth, square internal and external corners and suitable preparation</p> <p>1.6. Material safety data sheets, or equivalent, are read and applied during the work</p> <p>1.7. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.8. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Apply levelling compounds and primers	<p>2.1. A mixing station is established where materials and equipment are prepared and positioned for use</p> <p>2.2. Trial applications of surface materials are made to check equipment operation, materials consistency and specified surface finish</p> <p>2.3. Surface coating is applied with the depth and coverage in accordance with manufacturer specifications and job requirements</p> <p>2.4. Internal and external corners are checked for square, wall surfaces are checked for plane and smooth and cleared for further processing</p> <p>2.5. Completed work is checked for flaws in installation and materials and faults rectified</p>
3. Complete housekeeping	<p>3.1. Unused materials are stored or recycled as required</p> <p>3.2. Tools and equipment are cleaned and stored appropriately</p> <p>3.3. Work area is cleaned and rubbish disposed of appropriate</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4. Workplace documentation and/or reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate wall substrate preparation problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - wall substrate patching and smoothing techniques
- seek learning opportunities
- use the limited workplace technology related to the preparation of a substrate including tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to patching and smoothing techniques
- organisation and site standards, requirements, policies and procedures for applying smoothing and patching compounds
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

maintenance

- characteristics of materials, products and defects
- set up and operation of equipment
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- characteristics and requirements of substrate preparation
- type, characteristics, uses and limitations of smoothing compounds and primers
- workplace safety system requirements related to the application of smoothing compounds and primers

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Complete to Australian standards a minimum of two wall preparations which are to include:
 - a patch and repair to a wall including internal and external corners
 - a skim coat to walls including internal and external corners
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to substrate smoothing and patching activities
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

EVIDENCE GUIDE

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Wall preparation	<ul style="list-style-type: none"> is to include the application of primers, repairing and smoothing cement based compounds
Substrate	<ul style="list-style-type: none"> may include concrete, cement rendered, fibrous cement board, MDF/HDF hard

RANGE STATEMENT	
	underlay, ply sheeting or hardboard
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • are to include utility knife, straight edge, square, tape measure, spirit level, screed bar, finishing trowel, corner trowel, spatula, rollers, brushes, measuring buckets, batching buckets, angle grinder and trolley
Materials	<ul style="list-style-type: none"> • are to include but are not limited to sanding paper, grinding discs, carborundum brick, smoothing and repairing compounds and primers

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Floor Preparation
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Co-requisite units

Co-requisite units	

LMFFL2107A Select, operate and maintain grinding equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to select, operate and maintain grinding equipment in applications relating to floor preparation.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of sub-floor preparation operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify grinding equipment	1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the use of grinding equipment, are verified and complied with 1.2. <i>Types of grinding equipment</i> and their functions are identified from <i>relevant information sources</i> 1.3. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks 1.4. <i>Sources of power supply</i> are recognised
2. Select grinding equipment	2.1. Grinding equipment and <i>attachments</i> are selected consistent with the needs of the job 2.2. Grinding equipment is checked for serviceability and safety and any <i>faults</i> are correct or processed for repair
3. Clean and prepare sub-floor	3.1. Appropriate <i>personal protective equipment</i> is selected, correctly fitted and used 3.2. <i>Fittings and fixtures</i> are removed from the sub-floor 3.3. Sub-floor is cleared of loose debris and dirt and cleaned
4. Smooth the floor	4.1. <i>Work sequence</i> and starting point are selected 4.2. Perimeter is smoothed using light equipment and appropriate cutter 4.3. Main area is smoothed to the required <i>standard</i> using the most appropriate available equipment in accordance with the manufacturer specification 4.4. Floor area is cleaned, inspected and reworked as required
5. Clean up work area and tools	5.1. All tools are cleaned, maintained and stored 5.2. Equipment is cleaned, maintained and stored 5.3. Work area is cleared and waste removed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of faults and problems
- collect and understand information related to the use and maintenance of grinding equipment
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate grinding problems to avoid rework and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organize activities including the preparation and layout of the worksite and the obtaining of tools
- use mathematical ideas and techniques to correctly complete measurements and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use workplace technology related to the use and operator maintenance of grinders and associated materials

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the use of grinding equipment
- Standards including AS/NZS 2455 and AS 1884 (1985)
- organisational and site standards, requirements, policies and procedures for the use of grinding equipment
- types of grinders and procedures for their safe use, operation and maintenance
- grinder attachments, their uses, limitations and maintenance requirements
- environmental protection requirements
- established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

problem identification and resolution

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for operating and maintaining grinding equipment
- Apply safe handling practices for equipment, products and materials
- Adopt and carry out correct procedures prior to and during use of the grinding equipment prescribed above in the Range Statement
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Smooth a concrete sub-floor using single headed, double headed and planetary action grinders correctly and safely to the relevant Australian Standard
- Complete operator maintenance on grinding equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - access to single, double and planetary action grinders

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • access to manufacturer/user instructions and/or manuals • a realistic smoothing requirement
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other related units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Types of grinding equipment	<ul style="list-style-type: none"> are to include single headed, double headed and planetary action grinders
Instructions	<ul style="list-style-type: none"> Grinder manufacturer specifications and operational procedures Workplace procedures relating to ohs, tool

RANGE STATEMENT	
	<p>handling and operation, reporting and communication</p> <ul style="list-style-type: none"> • Work instructions, including job sheets, plans, drawings and designs
Sources of power supply	<ul style="list-style-type: none"> • may be single or 3-phase
Attachments	<ul style="list-style-type: none"> • are to include air cleaning/vacuum attachment and carbonum dum stove and diamond stoves
Fault reporting	<ul style="list-style-type: none"> • in the operation of grinding equipment may be verbal or written
Personal protective equipment	<ul style="list-style-type: none"> • is to include that prescribed under legislation, regulation and enterprise policies and practices
Fittings and fixtures	<ul style="list-style-type: none"> • include nails, door stops, gripper strips, metal mouldings and debris
Work sequence	<ul style="list-style-type: none"> • is likely to cover inspect, select equipment and accessories, clean sub-floor, smoothing, cleaning and rework
Standards	<ul style="list-style-type: none"> • AS/NZS 2455 and AS 1884 (1985)

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Floor Preparation
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Co-requisite units

Co-requisite units		

LMFFL2108A Select, operate and maintain shot blasting equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to select, operate and maintain shot blasting equipment in applications relating to floor preparation.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of sub-floor preparation operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify shot blasting equipment	1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the use of shot blasting equipment, are verified and complied with 1.2. <i>Types of shot blasting equipment</i> and their functions are identified from relevant information sources 1.3. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks 1.4. <i>Sources of power supply</i> are recognised
2. Shot blasting equipment	2.1. Shot blasting equipment and shot size are selected consistent with the needs of the job 2.2. Shot blasting equipment is checked for serviceability and safety and any <i>faults</i> are correct or processed for repair
3. Clean and prepare sub-floor	3.1. Appropriate <i>personal protective equipment</i> is selected, correctly fitted and used 3.2. <i>Fittings and fixtures</i> are removed from the sub-floor 3.3. Sub-floor is cleared of loose debris and dirt and cleaned
4. Shot blast the floor	4.1. <i>Work sequence</i> and starting point are selected 4.2. Perimeter is shot blasted using light equipment and appropriate cutter 4.3. Main area is shot blasted to the required <i>standard</i> using the most appropriate available equipment in accordance with the manufacturer specification 4.4. Floor area is cleaned, inspected and re-worked as required
5. Clean up work area and tools	5.1. All tools are cleaned, maintained and stored 5.2. Equipment is cleaned, maintained and stored 5.3. Work area is cleared and waste removed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of faults and problems
- collect and understand information related to the use and maintenance of shot blasting equipment
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate shot blasting problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organize activities, including the preparation and layout of the worksite and the obtaining of tools
- use mathematical ideas and techniques to correctly complete measurements and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use workplace technology related to the use and operator maintenance of shot blasters and associated materials

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to shot blasting
- Standards including AS/NZS 2455 and AS 1884 (1985)
- organisational and site standards, requirements, policies and procedures for the use of shot blasting equipment
- types of shot blasters and procedures for their safe use, operation and maintenance
- shot blaster attachments, their uses, limitations and maintenance requirements
- characteristics, uses and limitations of the available shot sizes
- environmental protection requirements
- established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

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| <ul style="list-style-type: none">• problem identification and resolution |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for operating and maintaining shot blasting equipment
- Apply safe handling practices for equipment, products and materials
- Adopt and carry out correct procedures prior to and during use of the shot blasting equipment prescribed above in the Range Statement
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Shot blast a minimum of two concrete sub-floors to the relevant Australian Standard
- Complete operator maintenance on shot blasting equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - access to shot blasting equipment and shot
 - access to manufacturer/user instructions and/or manuals

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • a reasonable shot blasting requirement
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other related units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling, including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Types of shot blasting equipment	<ul style="list-style-type: none"> share technology and differ only in size and capacity
Instructions	<ul style="list-style-type: none"> Shot blaster manufacturer specifications and operational procedures Workplace procedures relating to OHS, tool

RANGE STATEMENT	
	handling and operation, reporting and communication <ul style="list-style-type: none"> • Work instructions, including job sheets, plans, drawings and designs
Sources of power supply	<ul style="list-style-type: none"> • may be electrical (single or 3-phase) and gas
Attachments	<ul style="list-style-type: none"> • are to include air cleaning/vacuum systems
Fault reporting	<ul style="list-style-type: none"> • in the operation of blasting equipment may be verbal or written
Personal protective equipment	<ul style="list-style-type: none"> • is to include that prescribed under legislation, regulation and enterprise policies and practices
Fittings and fixtures	<ul style="list-style-type: none"> • include nails, door stops, gripper strips, metal mouldings and debris
Work sequence	<ul style="list-style-type: none"> • is likely to cover inspect, select equipment and accessories, clean sub-floor, shot blasting, cleaning and rework
Standards	<ul style="list-style-type: none"> • AS/NZS 2455 and AS 1884 (1985)

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Floor Preparation
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Co-requisite units

Co-requisite units	

LMFFL2109A Select, operate and maintain demolition equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to select, operate and maintain demolition equipment in applications relating to floor preparation.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of sub-floor preparation operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify demolition equipment	1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the use of demolition equipment, are verified and complied with 1.2. <i>Types of demolition equipment</i> and their functions are identified from relevant information sources 1.3. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks 1.4. <i>Sources of power supply</i> are recognised
2. Demolition equipment	2.1. Demolition equipment and <i>attachments</i> are selected consistent with the needs of the job 2.2. Demolition equipment is checked for serviceability and safety and any <i>faults</i> are correct or processed for repair
3. Clean and prepare sub-floor	3.1. Appropriate <i>personal protective equipment</i> is selected, correctly fitted and used 3.2. <i>Fittings and fixtures</i> are removed from the sub-floor 3.3. Sub-floor is cleared of loose debris and dirt and cleaned
4. Remove floor portions	4.1. <i>Work sequence</i> and starting point are selected 4.2. Perimeter of floor portion is identified and marked 4.3. Depth of removal requirement is confirmed 4.4. Floor portion is removed in the most efficient manner 4.5. Floor area is cleaned, inspected and reworked as required
5. Clean up work area and tools	5.1. All tools are cleaned, maintained and stored 5.2. Equipment is cleaned, maintained and stored 5.3. Work area is cleared and waste removed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of faults and problems
- collect and understand information related to the use and maintenance of demolition equipment
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate demolition problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organize activities including the preparation and layout of the worksite and the obtaining of tools
- use mathematical ideas and techniques to correctly complete measurements and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use workplace technology related to the use and operator maintenance of demolition equipment and associated materials

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the use of demolition equipment
- organisational and site standards, requirements, policies and procedures for the use of demolition equipment
- types of demolition equipment, their uses, limitations and maintenance requirements and procedures for their safe use, operation and maintenance
- demolition equipment attachments, their uses, limitations and maintenance requirements
- environmental protection requirements
- established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• problem identification and resolution |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for operating and maintaining demolition equipment
- Apply safe handling practices for equipment, products and materials
- Adopt and carry out correct procedures prior to and during use of the demolition equipment prescribed above in the Range Statement
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Use each of the equipments listed in the Range Statement
- Remove a minimum of two significant floor sections in accordance with job requirements and industry standard
- Complete operator maintenance on demolition equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • access to appropriate demolition equipment • access to manufacturer/user instructions and/or manuals • a realistic demolition requirement
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other related units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Types of demolition equipment	<ul style="list-style-type: none"> is to include jack hammers, scrabblers, percussion drills
Instructions	<ul style="list-style-type: none"> Demolition equipment manufacturer specifications and operational procedures Workplace procedures relating to OHS, tool

RANGE STATEMENT	
	handling and operation, reporting and communication <ul style="list-style-type: none"> • Work instructions, including job sheets, plans, drawings and designs
Sources of power supply	<ul style="list-style-type: none"> • may include pneumatic, electric or gas
Attachments	<ul style="list-style-type: none"> • are to include cutting heads, chisel points, spade tips, spikes and may include vacuum systems
Fault reporting	<ul style="list-style-type: none"> • in the operation of demolition equipment may be verbal or written
Personal protective equipment	<ul style="list-style-type: none"> • is to include that prescribed under legislation, regulation and enterprise policies and practices
Fittings and fixtures	<ul style="list-style-type: none"> • include nails, door stops, gripper strips, metal mouldings and debris
Work sequence	<ul style="list-style-type: none"> • is likely to cover inspect, select equipment and accessories, clean sub-floor, demolition task, cleaning and re-work

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Floor Preparation
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Co-requisite units

Co-requisite units		

LMFFL2110A Select, operate and maintain scarifying equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use scarifying equipment in applications relating to floor preparation.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of sub-floor preparation operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify scarifying equipment	1.1. Applicable OHS, legislative and organisational requirements relevant to the use of scarifying equipment, are verified and complied with 1.2. <i>Types of scarifying equipment</i> and their functions are identified from relevant information sources 1.3. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks 1.4. Sources of power supply are recognised
2. Scarifying equipment	2.1. Scarifying equipment and shot size are selected consistent with the needs of the job 2.2. Scarifying equipment is checked for serviceability and safety and any <i>faults</i> are correct or processed for repair
3. Clean and prepare sub-floor	3.1. Appropriate <i>personal protective equipment</i> is selected, correctly fitted and used 3.2. <i>Fittings and fixtures</i> are removed from the sub-floor 3.3. Sub-floor is cleared of loose debris and dirt and cleaned
4. Scarify the floor	4.1. <i>Work sequence</i> and starting point are selected 4.2. Perimeter is prepared using an angle grinder 4.3. Main area is scarified using the most appropriate available equipment in accordance with AS/NZS 2455 and AS 1884 (1985) or subsequent replacement standards 4.4. Floor area is cleaned, inspected and reworked as required
5. Clean up work area and tools	5.1. All tools are cleaned, maintained and stored 5.2. Equipment is cleaned, maintained and stored 5.3. Work area is cleared and waste removed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of faults and problems
- collect and understand information related to the use and maintenance of scarifying equipment
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate scarifying problems to avoid rework and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of tools
- use mathematical ideas and techniques to correctly complete measurements and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use workplace technology related to the use and operator maintenance of scarifying equipment and associated materials

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the use of scarifying equipment
- organisational and site standards, requirements, policies and procedures for preparing and presenting design information for the use of hand and power tools
- types of scarifier attachments, their uses, capabilities and maintenance requirements
- characteristics, uses and limitations of the available shot sizes
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for operating and maintaining scarifying equipment
- Apply safe handling practices for equipment, products and materials
- Adopt and carry out correct procedures prior to and during use of the scarifying equipment prescribed above in the Range Statement
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Scarify a concrete sub-floor of a minimum of 10 sgm to industry standards
- Smooth a concrete sub-floor using single headed, double headed and planetary action grinders correctly and safely to the relevant Australian Standard
- Complete operator maintenance on scarifying equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace.
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • access to scarifying equipment and attachments • access to manufacturer/user instructions and/or manuals
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Types of scarifying equipment	<ul style="list-style-type: none"> Types of scarifying equipment share technology and differ only in size and capacity
Instructions	<ul style="list-style-type: none"> Scarifying equipment manufacturer specifications and operational procedures Workplace procedures relating to OHS, tool

RANGE STATEMENT	
	handling and operation, reporting and communication <ul style="list-style-type: none"> • Work instructions, including job sheets, plans, drawings and designs
Sources of power supply	<ul style="list-style-type: none"> • may be electric, gas or petrol
Attachments	<ul style="list-style-type: none"> • Attachments are to include cutting heads and may include vacuum systems
Fault reporting	<ul style="list-style-type: none"> • Reporting of faults in the operation of hand and power tools may be verbal or written
Personal protective equipment	<ul style="list-style-type: none"> • Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices
Fittings and fixtures	<ul style="list-style-type: none"> • Fittings and fixtures include nails, door stops, gripper strips, metal mouldings and debris
Work sequence	<ul style="list-style-type: none"> • Work sequence in the competency is likely to cover inspect, select equipment and accessories, clean sub-floor, preparation of perimeter and scarifying, cleaning and rework

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Floor Preparation
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Co-requisite units

Co-requisite units	

LMFFL2111A Coarse sand timber flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to coarse sand existing floors using a drum or belt driven sanding machine to grade the surface and remove cupping, ridges, high points or deep scratches and usually involving three passes and the gradual overlapping of each run.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for the work	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to <i>coarse sanding of timber flooring</i> are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Timber flooring is checked for contamination and moisture content</p> <p>1.4. Timber flooring condition is assessed and the extent of floor preparation required to meet job specifications is confirmed</p> <p>1.5. Timber flooring is inspected for suitability for sanding operations and any pre-sanding tasks are completed</p> <p>1.6. <i>Mechanical fixings</i> are removed avoiding damage to equipment and surfaces</p> <p>1.7. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.8. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Conduct coarse sanding operations	<p>2.1. <i>Coarse sanding equipment</i> is set up in accordance with manufacturer instructions and operating procedures</p> <p>2.2. Emergency stops, gauges, guards and controls are identified and checked</p> <p>2.3. Equipment settings and adjustments are made and checked</p> <p>2.4. Trial runs are conducted to check machine operations and quality of finished work</p> <p>2.5. Sanding belts or papers are attached, routinely checked and changed as required</p> <p>2.6. Sanding is completed systematically and effectively within the minimum required timeframe</p> <p>2.7. Routine lubrication and adjustments to the equipment are completed as required</p> <p>2.8. Timber flooring is cleared and checked for further processing</p>
3. Edge sanding operations	<p>3.1. Edge sanding equipment is set up in accordance with manufacturer instructions and operating procedures</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. Emergency stops, gauges, guards and controls are identified and checked</p> <p>3.3. Equipment settings and adjustments are made and checked</p> <p>3.4. Sanding papers are selected</p> <p>3.5. Trial runs are conducted to check machine operations and quality of finished work</p> <p>3.6. Sanding papers are attached, routinely checked and changed as required</p> <p>3.7. Edge sanding is completed systematically and effectively within the minimum required timeframe</p> <p>3.8. Routine lubrication and adjustments to the equipment are completed as required</p> <p>3.9. Finished timber flooring is cleaned, inspected and any imperfections are rectified following workplace procedures</p>
4. Complete housekeeping	<p>4.1. Unused materials are stored or recycled as required</p> <p>4.2. Tools and equipment are cleaned and stored appropriately</p> <p>4.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>4.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems to coarse sanding of timber floors to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- Seek learning opportunities
- Use the limited workplace technology related to the coarse sanding of timber floors including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to coarse sand timber flooring
- organisational and site standards, requirements, policies and procedures for coarse sanding of timber flooring
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

- maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- characteristics and requirements of timber flooring coarse sanding
- type, characteristics, uses and limitations of coarse sanding timber flooring
- types and uses of relevant tools and equipment used to conduct coarse sanding operations
- workplace safety system requirements related to coarse sanding timber flooring

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for coarse sanding timber floors • Interpret work order and locate relevant information • Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment • Follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> • prevent damage to goods, equipment and products • maintain required production output and product quality • minimise the risk of injury to self and others • Complete a minimum of two timber flooring preparations requiring coarse sanding • Work effectively with others • Modify activities to cater for variations in workplace context and environment
<p>Context of, and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to coarse sanding timber floors • specifications and work instructions
<p>Method of assessment</p>	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and</p>

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Coarse sanding of timber flooring	<ul style="list-style-type: none"> is to include removal of mechanical fixings, punching of nails, sanding the timber flooring to grade the surface and remove cupping, ridges, high points or deep scratches

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Mechanical fixings	<ul style="list-style-type: none"> • are to include tacks, nails, staples and screws
Tools and equipment	<ul style="list-style-type: none"> • are to include hammer, scrapers, punches, brooms, vacuums, leads and dust masks
Materials	<ul style="list-style-type: none"> • are to include but are not limited to sanding belts, sanding paper, sanding discs, oil and lubricants
Coarse sanding equipment	<ul style="list-style-type: none"> • is to include split drum and belt floor sanders, edge sander, sanding discs using 24 - 60 grit papers, oil and lubricants

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Floor Preparation
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Co-requisite units

Co-requisite units	

LMFFL2112A Install hard underlays

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to cut and fit hard underlay materials prior to laying the floor coverings.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the installation of <i>hard underlays</i> , are verified and complied with 1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks 1.3. Sub-floor condition is assessed for the type of underlay/floor covering to be installed 1.4. Underlay material suitable to the final surface to be laid is selected 1.5. Suitable <i>adhesives</i> and fastenings are selected 1.6. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 1.7. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation
2. Set out materials	2.1. Hard underlay to be installed is checked against order 2.2. Hard underlay is acclimatised according to manufacturer recommendations 2.3. Working lines and starting point are established 2.4. Materials are laid out to meet specification requirements and to minimise waste 2.5. Material is marked and cut to specification with minimum waste 2.6. Hard underlay is accurately and clearly marked for cutting 2.7. Hard underlay is cut to required shape with minimum waste of materials
3. Lay underlay	3.1. Instructions and sequence for laying and fixing are followed 3.2. Materials for fixing are organised and used in accordance with relevant safety management requirements 3.3. Fixing methods and equipment are used following manufacturer instructions 3.4. Completed installation is checked for flaws in installation and materials and faults rectified
4. Complete	4.1. Unused materials are stored or recycled as required

ELEMENT	PERFORMANCE CRITERIA
housekeeping	4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation or reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing hard underlays to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installation of hard underlays, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing hard underlays
- organisational and site standards, requirements, policies and procedures for installing hard underlays
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

maintenance

- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of:
 - hard underlays
 - hard underlay installation adhesives
- types and uses of hard underlays, tools and equipment
- workplace safety system requirements related to the installation of hard underlay
- characteristics and requirements of sub-floor preparation
- work flow in relation to the floor covering operations

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing hard underlays
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- To complete a minimum of:
 - one installation using hardboard
 - one installation using fibrous cement board
 - one installation using MDF/HDF board
 - one installation using ply flooring/construction flooring
 - one installation floating sub-strate underlay
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • materials and equipment relevant to installing hard underlays • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Hard underlay

- is a rigid material installed as a base under a floor covering. It may include, but is not limited to the following materials:
 - hardboard
 - fibrous cement board

RANGE STATEMENT	
	<ul style="list-style-type: none"> • MDF/HDF hard underlay • ply flooring (construction sheet flooring) • floating sub-strate flooring
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesive	<ul style="list-style-type: none"> • may include acrylic, polyurethane elastameric
Tools and Equipment	<ul style="list-style-type: none"> • are to include jigsaw, handsaw, utility knife, straight edge, pencils, square, scoring knife, hand guillotine, hand stapler, mallet, air compressor and gun, explosive tool, rotary / hammer drill, masonry drill bits, bar scribe, jigsaw, circular saw and bench saw
Materials	<ul style="list-style-type: none"> • are to include but are not limited to underlay, staples, nails, adhesive, Tap0Its nylon fasteners, raw plugs, screws and tapes

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Resilient
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Co-requisite units

Co-requisite units		

LMFFL2201A Install carpet cushion/underlays and gripper accessories

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to prepare, lay out, cut, lay and fix carpet cushion/underlays, and carpet gripper accessories prior to laying carpet floor coverings using the carpet gripper system.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the preparation for the installation of carpets are verified and complied with 1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks 1.3. Sub-floor condition is assessed for the type of <i>carpet cushion/ underlay</i> /floor covering to be installed 1.4. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 1.5. Suitable <i>adhesives, fixing trims</i> and accessories are selected 1.6. Materials are laid out to meet specification requirements and to minimise waste 1.7. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation
2. Set out materials	2.1. Carpet cushion/underlay and gripper accessories to be installed is checked against order 2.2. Carpet cushion/underlays are acclimatised according to manufacturer recommendations 2.3. <i>Carpet grippers</i> are fitted in accordance with specifications, plan and/or enterprise procedures 2.4. <i>Metal mouldings</i> are fitted in accordance with specifications, plan and/or enterprise procedures
3. Lay floor covering	3.1. Instructions and sequence for laying and fixing are followed 3.2. Underlay is cut to required shape with minimum waste of materials 3.3. Materials for fixing are organised and used in accordance with relevant safety management requirements 3.4. Underlay is fixed using methods and equipment which follow manufacturer instructions
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation and/or reports are

ELEMENT	PERFORMANCE CRITERIA
	completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate installation problems with carpet cushion/underlays, gripper strips and metal mouldings to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the preparation of carpet cushion/underlay, gripper strips and metal mouldings, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installation of carpet cushion/underlays and gripper accessories
- organisational and site standards, requirements, policies and procedures for carpet cushion/underlays, gripper strips and metal mouldings
- environmental protection requirements
- established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of carpet cushion/underlay and gripper accessories
- types and uses of soft carpet cushion/underlay and gripper accessories installation tools and equipment
- workplace safety system requirements related to cutting and fitting carpet cushion/underlays and gripper accessories
- characteristics and requirements of sub-floor preparation
- work flow in relation to cutting and fitting carpet cushion/underlays, gripper strips and metal mouldings

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of two carpet cushion/underlay installations with one incorporating such obstructions as doorways, fittings and irregular (obtuse/acute) angles using the carpet gripper installation system
- Modify activities to cater for variations in workplace contexts and environment
- Work effectively with others
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to installing carpet cushion/underlays and gripper adhesives
 - specifications and work instructions

EVIDENCE GUIDE	
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment Workplace instructions, including job sheets, plans, drawings and designs Workplace procedures relating to reporting

RANGE STATEMENT	
	<p>and communications</p> <ul style="list-style-type: none"> • Manufacturer instructions for the use of equipment and materials
Carpet cushion/underlay	<ul style="list-style-type: none"> • is a flexible or fibrous material installed as a soft base under a floor covering. They may be single fibre, composite fibre, foam rubber or bonded foam
Tools and equipment	<ul style="list-style-type: none"> • are to include utility knife, straight edge, hammer, heavy-duty electrical drill, hacksaw, carpet gripper strip cutters, extension hammer driving bar, staple hammer, mitre box and nail driving bar • may include pneumatic 'T' nailer and nail gun
Materials	<ul style="list-style-type: none"> • are to include but are not limited to soft underlays, carpet gripper strips, metal mouldings, tapes, adhesives, nails, plug, staples and primers
Adhesives	<ul style="list-style-type: none"> • are to include solvent and water-based contact, construction adhesive, latex/resin/acrylic
Fixing trims	<ul style="list-style-type: none"> • are to include nails and tap IT nylon fasteners
Carpet grippers	<ul style="list-style-type: none"> • are teathed metal or timber strips to which floor coverings are attached to maintain its position, tension and shape
Metal mouldings	<ul style="list-style-type: none"> • are fitted at thresholds and abutments to other flooring surfaces

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Carpets
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Co-requisite units

Co-requisite units		

LMFFL2202A Install unpatterned tufted and bonded carpet floor coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to install unpatterned tufted and bonded carpet floor coverings including preparation, cutting, layout, joining, power stretching, trimming and finishing using the carpet gripper installation system.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the installation of unpatterned tufted and bonded carpet floor coverings are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans/sketchers are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.4. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials	<p>2.1. Carpet to be installed is checked against order</p> <p>2.2. Carpet is acclimatised according to manufacturers' recommendations</p> <p>2.3. Underlay and gripper strips are inspected to confirm correct fitting</p> <p>2.4. Work area is cleared of scraps or other contaminants</p>
3. Lay floor covering	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Carpet pieces are laid out and checked for size, direction of pile match</p> <p>3.3. Carpet pieces are cut, sealed and joined</p> <p>3.4. Stretching and fixing methods are used following manufacturer instructions and Australian Standards</p> <p>3.5. Finished work is inspected for compliance with work order, workplace and Australian Standards of finish</p>
4. Complete housekeeping	<p>4.1. Unused materials are stored or recycled as required</p> <p>4.2. Tools and equipment are cleaned and stored appropriately</p> <p>4.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>4.4. Workplace documentation and/or reports are completed.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems when installing carpet when using the carpet gripper installation system to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installation of unpatterned tufted and bonded carpet using the carpet gripper installation system, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing unpatterned tufted and bonded carpet floor coverings
- organisational and site standards, requirements, policies and procedures for installing unpatterned tufted and bonded carpet floor coverings
- environmental protection requirements
- established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of tufted and bonded carpets
- types and uses of carpet installation tools, equipment and materials
- techniques for joining and stretching carpet
- workplace safety system requirements related to carpet gripper installation systems
- characteristics and requirements of soft underlays, gripper strips and metal mouldings
- work flow in relation to preparation, layout, stretching, cutting and finishing of carpet

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for preparing and presenting design information
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Complete a minimum of:
 - installation of tufted carpet
 - installation of bonded carpet using a carpet gripper installation system to connecting rooms, including at least one seam join and one cross join
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to installing tufted and fusion bonded carpet using the carpet

EVIDENCE GUIDE	
	<p>gripper installation system</p> <ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting

RANGE STATEMENT	
	and communications <ul style="list-style-type: none"> • Manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • are to include carpet knee kicker, power stretcher, carpet wall trimmer, carpet stair tool, trolley, hammer, utility knife, spiked carpet roller, weight or seam roller, awl, carpet spreader, carpet shears, napping shears, loop pile cutter, cushion backed cutter and hooked knife
Materials	<ul style="list-style-type: none"> • may include tufted and fusion bonded carpet

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Carpet
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Co-requisite units

Co-requisite units	

LMFFL2203A Install carpet tiles using standard installation procedures

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to install carpet tiles to single and connecting rooms using single directional installation methods, including the preparation, layout, cutting, laying and fixing of carpet tiles.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the installation of <i>carpet tiles</i> are verified and complied with 1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks 1.3. Sub-floor condition is assessed for installation for carpet tiles 1.4. Suitable <i>adhesives</i> , trims and accessories are selected 1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation
2. Set out materials	2.1. Carpet tiles to be installed are checked against the order 2.2. Carpet tiles are acclimatised according to manufacturers' recommendation 2.3. Materials for fixing are organised and used in accordance with relevant safety management requirements 2.4. Working lines and starting point are established
3. Lay floor covering	3.1. Instructions and sequence for laying and fixing are followed 3.2. Materials are laid out to meet specification requirements and to minimise waste 3.3. Material grains and patterns are matched or contrasted as appropriate 3.4. Tiles are accurately and clearly marked for cutting 3.5. Tiles are cut to required shape with minimum waste of materials and laid 3.6. Completed installation is checked for flaws in installation and materials and faults are rectified
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately

ELEMENT	PERFORMANCE CRITERIA
	4.4. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing carpet tiles using standard installation procedures to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installation of carpet tiles using standard installation procedures, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to install carpet tiles using standard installation procedures
- organisational and site standards, requirements, policies and procedures for the installation of carpet tiles using standard installation procedures
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- types, characteristics, uses and limitations of:
 - carpet tiles
 - carpet tile installation adhesives
- the types and uses of tile installation tools and equipment
- workplace safety system requirements related to carpet tile laying
- characteristics and requirements of sub-floor preparation
- work flow in relation to the floor covering operations

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the installation of carpet tiles using standard installation procedures
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of:
 - one full-spread installation, including appropriate trims and accessories
 - one grid-based installation, including appropriate trims and accessories
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to laying carpet tiles

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling, including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Carpet tiles

- may be backed or un-backed, fixed or un-fixed, wool, synthetic or combination of fibres, pile, needle-punch, tufted, fusion bonded and woven, modular and square to one metre

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturers' instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • are to include pressure sensitive and wet acrylics, water and solvent based contacts and double sided tape
Tools and equipment	<ul style="list-style-type: none"> • are to include utility knife, straight edge, square, chalk-line, tape measure, hacksaw, serrated trowel, hammer and napping shears, and may include, but not be limited to, roller, airless spray gun and knee kicker
Materials	<ul style="list-style-type: none"> • are to include but are not limited to carpet tiles, trims, stair nosings, skirting, reducing and edge strips, adhesive and tapes

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Carpets
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Co-requisite units

Co-requisite units		

LMFFL2204A Install unpatterned tufted and bonded carpet floor coverings to stairs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to install unpatterned tufted and bonded carpet floor coverings to box and wider steps using the carpet gripper system.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to installing unpatterned tufted and bonded <i>carpet</i> to <i>stairways</i> are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. Floor condition is assessed for suitability for installation of unpatterned tufted and bonded carpet</p> <p>1.4. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.5. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials	<p>2.1. Carpet to be installed is checked against order</p> <p>2.2. Tufted and bonded carpets are acclimatised according to manufacturer recommendations</p> <p>2.3. <i>Stairway</i> or step is measured and the required amount of floor covering, and underlay including allowances for type of stairs, is calculated and obtained</p> <p>2.4. Suitable adhesives, gripper strips and edge strips are selected</p> <p>2.5. Gripper strips are cut and installed as specified in AS/NZS2455.1.1995</p> <p>2.6. Underlay is checked against specified type and fitted as specified in AS/NZS2455.1.1995</p>
3. Lay floor coverings	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Carpet floor coverings are laid out to meet allowances for type of stair requirements and minimise waste</p> <p>3.3. Carpet floor coverings are accurately and clearly marked for cutting</p> <p>3.4. Carpet floor coverings are cut to required shape with minimum waste of materials and laid</p> <p>3.5. Instructions, sequence, fixing methods and equipment are used following specifications and Australian Standards AS/NZS2455.1.1995</p> <p>3.6. Installation is completed to specification</p>

ELEMENT	PERFORMANCE CRITERIA
	3.7. Finished stairway is checked for flaws in installation and materials and faults rectified
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing unpatterned tufted and bonded carpet to stairs to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installing of unpatterned tufted and bonded carpet to stairs, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing unpatterned tufted and bonded carpet on stairs
- organisational and site standards, requirements, policies and procedures for the installation of unpatterned tufted and bonded carpet on stairs
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- types and characteristics of stairway
- types and uses of carpet installation tools, equipment and materials
- types, uses and limitations of stairway carpet fixing techniques
- characteristics of timber and concrete sub-floors
- workplace safety system requirements related to stairway carpet installation
- work flow in relation to the installation of carpets on stairways

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing unpatterned tufted and bonded carpet on stairways
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- To complete a minimum of the installation of one tufted carpet and one fusion bonded carpet to:
 - a box step stairway containing at least 12 steps, and
 - a kite winder treads stairway containing at least 3 steps
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to preparing and

EVIDENCE GUIDE	
	<p>installing tufted and bonded carpet to box and winder step</p> <ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but are not limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Carpet	<ul style="list-style-type: none"> may include unpatterned tufted and fusion bonded carpet
Stairway	<ul style="list-style-type: none"> may include box steps and kite winder treads

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • are to include knee kicker, stair tool, carpet gripper cutters, trimmer, hammer, staple hammer, compressor, air staple gun, utility knife, straight edge, drill, hacksaws and sewing needles
Materials	<ul style="list-style-type: none"> • may include but are not limited to underlay, tapes and adhesives, trims, nosing, gripper strips, smooth edges and accessories

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Carpet
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Co-requisite units

Co-requisite units	

LMFFL2301A Install lay flat vinyl floor coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to install lay flat vinyl floor coverings to single and connecting rooms including pattern matching seam cutting, joining and sealing.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	1.1. Applicable legislative, OHS and organisational requirements relevant to installing lay flat vinyl floor coverings are verified and complied with 1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks 1.3. Sub-floor condition is assessed for installation of lay flat vinyl flooring 1.4. Sub-floor is prepared for lay flat vinyl floor covering 1.5. Suitable adhesives, trims and accessories are selected 1.6. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 1.7. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation
2. Set out materials	2.1. Lay flat vinyl coverings to be installed are checked against order 2.2. Lay flat vinyl floor coverings are acclimatised according to manufacturers' recommendations 2.3. Lay flat resilient floor coverings for fixing are organised and used in accordance with relevant safety management requirements 2.4. Working lines and starting point are established
3. Lay floor covering	3.1. Instructions and sequence for laying and fixing are followed 3.2. Lay flat vinyl floor coverings are laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate 3.3. Lay flat resilient floor coverings are accurately and clearly marked for cutting 3.4. Lay flat resilient floor coverings are cut to required pattern and shape with minimum waste of materials 3.5. Adhesives are applied (if required) 3.6. Seams are sealed 3.7. Completed installation is checked for flaws in installation and materials and faults rectified
4. Complete	4.1. Unused materials are stored or recycled as required

ELEMENT	PERFORMANCE CRITERIA
housekeeping	4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing lay flat vinyl floor coverings to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installing lay flat vinyl floor coverings including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing lay flat vinyl floor coverings
- organisational and site standards, requirements, policies and procedures for installing lay flat vinyl floor coverings
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

- maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of:
 - lay flat vinyl floor coverings
 - lay flat vinyl floor covering installation adhesives
- types and uses of resilient floor covering installation tools and equipment
- workplace safety system requirements related to lay flat vinyl floor covering installation
- characteristics and requirements of sub-floor preparation
- work flow in relation to cutting and laying lay flat vinyl floor coverings

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing lay flat vinyl floor covering
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Cut, lay and fix lay flat vinyl floor coverings to a single room including pattern match at seams and cross joins, using free-hand, template and scribing method
- Cut, lay and fix lay flat vinyl floor coverings to connecting rooms, including pattern match at seams and cross joins, using free-hand, template and scribing method
- Cut, lay and fix lay flat vinyl floor coverings to a single room with a link up, including pattern match at seams and cross joins, using free-hand, template and scribing method
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or

EVIDENCE GUIDE	
	<p>Australian Standards requirements</p> <ul style="list-style-type: none"> • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to installing lay flat vinyl floor coverings • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but are not limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Lay flat vinyl floor coverings	<ul style="list-style-type: none"> may include encapsulated glass fibre, in laid and rotogravure
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment Workplace instructions, including job sheets,

RANGE STATEMENT	
	<p>plans, drawings and designs</p> <ul style="list-style-type: none"> • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • may include plasticised and rubber resin acrylic and water based and solvent based contact adhesive
Tools and equipment	<ul style="list-style-type: none"> • are to include utility knife, straight edge, square, chalk and chalk-line, lead pencils (HB and F), tape measure, hacksaw, notched trowel, hammer, scribing bar, divider, roller, rubber mallet, paint brush and bucket, spatula knife, trolley and wall trimmer
Materials	<ul style="list-style-type: none"> • are to include but are not limited to lay flat vinyl floor coverings, skirting, reducing and edge strips, double sided tape, pattern paper and adhesives

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Resilient
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Co-requisite units

Co-requisite units	

LMFFL2302A Install resilient tiles using standard installation procedures

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competencies required to install resilient tiles to single and connecting rooms using single directional installation methods.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to install <i>resilient tiles</i> using standard installation procedures are verified and complied with 1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks 1.3. Sub-floor condition is assessed for installation for resilient tiles 1.4. Suitable <i>adhesives</i> , trims and accessories are selected 1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation
2. Set out materials	2.1. Resilient tiles to be installed and checked against order 2.2. Resilient tiles are acclimatised according to manufacturer recommendations 2.3. Materials for fixing are organised and used in accordance with relevant safety management requirements 2.4. Working lines and starting point are established
3. Lay floor coverings	3.1. Instructions and sequence for laying and fixing are followed 3.2. Materials are laid out to meet specification requirements and to minimise waste 3.3. Material grains and patterns are matched or contrasted as appropriate 3.4. Tiles are accurately and clearly marked for cutting 3.5. Tiles are cut to required shape with minimum waste of materials and laid 3.6. Completed installation is checked for flaws in installation and materials and faults are rectified
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of

ELEMENT	PERFORMANCE CRITERIA
	appropriately 4.4. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing resilient tiles using standard installation procedures to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installation of resilient tiles using standard installation procedures including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing resilient tiles using standard installation procedures
- organisational and site standards, requirements, policies and procedures for the installation of resilient tiles using standard installation procedures
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- types, characteristics, uses and limitations of:
 - resilient tiles
 - resilient tile installation adhesives
- types and uses of resilient tile installation tools and equipment
- workplace safety system requirements related to resilient tile laying
- characteristics and requirements of sub-floor preparation
- work flow in relation to cutting and laying resilient tiles

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the installation of resilient tiles using standard installation procedures
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Install resilient tiles where cutting and fixing is required on either a timber or concrete sub-floor to complete a minimum of:
 - one homogeneous resilient tile installation using single direction pattern including the appropriate trim and accessories
 - one heterogeneous resilient tile installation using single direction pattern including the appropriate trim and accessories
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to installing resilient tiles using standard installation procedures • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but are not limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Resilient tiles	<ul style="list-style-type: none"> include homogenous/heterogeneous, linoleum, rubber, semi-rigid and rigid
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment Workplace instructions, including job sheets,

RANGE STATEMENT	
	<p>plans, drawings and designs</p> <ul style="list-style-type: none"> • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • are to include pressure sensitive and wet acrylics, water and solvent based contacts and double sided tape
Tools and equipment	<ul style="list-style-type: none"> • are to include utility knife, straight edge, square, chalk-line, tape measure, hacksaw, serrated trowel, hammer and napping shears, and may include, but not be limited to, roller, airless spray gun, tile scrubber and knee kicker
Materials	<ul style="list-style-type: none"> • are to include but are not limited to resilient tiles, trims, stair nosings, skirting, reducing and edge strips, adhesive and tapes

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Resilient
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Co-requisite units

Co-requisite units	

LMFFL2501A Install laminate and engineered timber flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to float a laminate, pre-finished or engineered timber floor within a space over a soft underlay including preparation, cutting, laying and fixing.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at the sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare materials for installation	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the installing laminate and engineered timber flooring are verified and complied with</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.3. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.4. Sub-floor condition is assessed for suitability for installation of laminate and engineered timber flooring</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the selection of a starting point, to ensure efficiency and quality of installation</p>
2. Set out materials for installation	<p>2.1. Laminate and engineered timber flooring is acclimatised according to manufacturer recommendations</p> <p>2.2. Laminate and engineered timber flooring for fixing is organised and used in accordance with relevant safety management requirements</p> <p>2.3. Skirting boards or cover trims are removed or undercut if required and stored for refitting or sent for machining</p> <p>2.4. Adhesives and edge strips are prepared for use as required</p> <p>2.5. Working lines and starting point are established</p>
3. Lay out flooring	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Appropriate underlay is laid according to manufacturers' recommendations</p> <p>3.3. Laminate and engineered timber flooring is laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins</p> <p>3.4. The aesthetics of the materials are maximised including matching grains and colours</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.5. Laminate and engineered timber flooring materials are accurately and clearly marked for cutting</p> <p>3.6. Materials are cut to length and size for final laying ensuring minimum waste</p>
4. Lay flooring	<p>4.1. Materials for fixing are organised and used in accordance with relevant safety management requirements</p> <p>4.2. Adhesives and edge strips/accessories are prepared for use as required</p> <p>4.3. Fixing methods and equipment are used following manufacturer recommendations</p> <p>4.4. Appropriate field and perimeter expansion joints are allowed</p> <p>4.5. Skirting boards or cover trims are fitted/refitted and finished</p> <p>4.6. Finished job is inspected and any imperfections are rectified following workplace procedures</p> <p>4.7. Any required preparations for sanding of flooring are made</p>
5. Complete housekeeping	<p>5.1. Unused materials are stored or recycled as required</p> <p>5.2. Tools and equipment are cleaned and stored appropriately</p> <p>5.3. Work area is cleaned and rubbish is disposed of appropriately</p> <p>5.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate installation problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - parquetry installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installing requirement, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the installation of laminate and engineered timber flooring
- organisational and site standards, requirements, policies and procedures for the installation of laminate and engineered timber flooring
- types, characteristics, uses and limitations of:
 - laminate and engineered timber flooring
 - installation adhesives
 - underlays

REQUIRED SKILLS AND KNOWLEDGE

- the types and uses of installation tools and equipment
- workplace safety systems relevant to the installation of laminate and engineered timber flooring
- characteristics and requirements of sub-floor preparation
- work flow in relation to flooring installation operations
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing laminate and engineered timber flooring
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of three of the following different types of installation:
 - glue-together system
 - direct stick system
 - self-locking system
 - inserted plastic tongue system
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • a realistic installation requirement • workplace location or simulated workplace • materials and equipment relevant for the installation of laminate and engineered timber flooring • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Laminate and engineered timber flooring	<ul style="list-style-type: none"> includes timber and laminated flooring planks
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Workplace instructions, instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Sub-floor assessment	<ul style="list-style-type: none"> • is to include testing for moisture content, expansion, rot, structural strength, smoothness and plane
Tools and equipment	<ul style="list-style-type: none"> • are to include drop saw, jig saw, hand saw, undercut saw, plunge saw, hammer, bar scriber and utility knife • may include circular saw, bench saw, straight edge, glue gun, staple gun, nailers, flooring cramps, strap clamps and wall clamps
Materials	<ul style="list-style-type: none"> • may include but not be limited to flooring materials, underlay, edge strips, tapes and adhesives
Adhesives	<ul style="list-style-type: none"> • may include PVAs, epoxies and polyurethane elastomeric

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFFL2502A Install impact and sound absorption underlay

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to install impact and sound absorption underlay over a new or existing sub-floor to provide impact and sound reduction in preparation for the installation of a laminate or engineered timber floor.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to installing <i>impact and sound absorbing underlay</i> are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Sub-floor condition is assessed for suitability for installation of impact and sound absorption underlay for timber flooring installation</p> <p>1.4. Suitable <i>adhesives</i>, trims and accessories are selected if required</p> <p>1.5. Impact and sound absorption underlay is checked against work orders</p> <p>1.6. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.7. Sequence of work is planned, including the starting point, to ensure cutting, laying and fitting is in logical order</p>
2. Set out materials	<p>2.1. Impact and sound absorption underlay to be installed is checked against the order</p> <p>2.2. Impact and sound absorption underlay are acclimatised according to manufacturer recommendations</p> <p>2.3. Impact and sound absorption underlay for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.4. Working lines and starting point are established</p>
3. Cutting impact and sound absorption underlay	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Impact and sound absorption underlay is laid out to meet directional sequence, specification requirements and to minimise waste and joins as appropriate</p> <p>3.3. Impact and sound absorption underlay is cut to required shape with minimum waste of materials</p>
4. Lay impact and sound absorption underlay	<p>4.1. Materials for fixing are organised and used in accordance with relevant safety management requirements</p> <p>4.2. Adhesives and edge strips/accessories are prepared</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>for use as required</p> <p>4.3. Apply adhesive to sub-floor (if required)</p> <p>4.4. Impact and sound absorption underlay is fixed using methods and equipment which follow manufacturer instructions</p> <p>4.5. Completed installation is checked for flaws in installation and materials and faults rectified following workplace procedures</p>
5. Complete housekeeping	<p>5.1. Unused materials are stored or recycled as required</p> <p>5.2. Tools and equipment are cleaned and stored appropriately</p> <p>5.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>5.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing impact and sound absorption underlay to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installing of impact and sound absorption underlay including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing impact and sound absorption underlay
- organisational and site standards, requirements, policies and procedures for installing impact and sound absorption underlay
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

maintenance

- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of impact and sound absorption underlay
- types and uses of impact and sound absorption underlay installation tools and equipment
- workplace safety system requirements related to cutting and fitting impact and sound absorption underlay
- characteristics and requirements of sub-floor preparation
- work flow in relation to cutting and fitting impact and sound absorption underlay

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing impact and sound absorption underlays
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of two impact and sound absorption underlay installations with one incorporating such obstructions as doorways, fittings and irregular (obtuse/acute) angles (dual-bonded and conventional)
- Communicate effectively and work safely with others in the work area
- Modify activities to cater for variations in workplace contexts and environment
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to install impact and sound absorption underlay • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Impact and sound absorption underlay	<ul style="list-style-type: none"> is a flexible or fibrous material installed as a soft base under timber floor covering. They may be single fibre, composite fibre, bonded foam or recycled rubber impact sound absorption underlays

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • are to include solvent and water-based contact, acrylic or polyurethane elastomeric
Tools and equipment	<ul style="list-style-type: none"> • are to include utility knife, straight edge, chalk line hammer, heavy-duty electrical drill, hacksaw and notched trowel
Materials	<ul style="list-style-type: none"> • are to include but are not limited to impact and sound absorption underlay, PVC tapes, adhesives, nails, plugs and primers

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units		

LMFFL2503A Nail strip timber flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to install strip timber flooring onto a sub-floor applying top-nailing or secret nailing methods.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at the trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the nailing of strip timber flooring onto a sub-floor applying top-nailing or secret nailing methods are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Sub-floor condition is assessed for suitability for nailing of strip timber flooring applying top-nailing or secret nailing methods consistent with Australian Standards, industry standards and manufacturer recommendations</p> <p>1.4. Suitable fixings and adhesives are selected as required.</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Prepare to nail strip timber flooring	<p>2.1. Instructions and sequence for nailing and fixing timber flooring are followed</p> <p>2.2. Work lines and starting point are established</p> <p>2.3. Timber flooring is laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate</p> <p>2.4. The aesthetics of the materials are maximised where appropriate, matching grains and colours</p> <p>2.5. Work station for power source for nail guns is established, air hoses are run to work site</p>
3. Nail strip timber flooring	<p>3.1. Nails, staples and adhesives for fixing are organised and used in accordance with relevant safety management requirements</p> <p>3.2. Nailing methods and equipment are used following manufacturer recommendations and Australian Standards</p> <p>3.3. Strip timber flooring is positioned using cramping procedures</p> <p>3.4. Top nailing or secret nailing methods are used as required for the job at hand</p> <p>3.5. Finished job is inspected and any imperfections are</p>

ELEMENT	PERFORMANCE CRITERIA
	rectified following workplace procedures
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Collect, organise and understand information related to work orders, basic plans and safety procedures
- Communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- Use pre-checking and inspection techniques to anticipate problems related to nailing strip timber flooring onto plywood underlay and timber battens to avoid re-work and wastage
- Recognise and respond to circumstances outside instructions or personal competence
- Plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- Clarify and confirm work instructions
- Plan work within given task parameters
- Accept responsibility for given tasks
- Set, monitor and satisfy personal work goals
- Satisfy the competency requirements for the job
- Maintain current knowledge of tools and materials
- Maintain current knowledge and techniques of nailing strip timber flooring onto plywood underlay or timber battens.
- Seek learning opportunities
- Use the limited workplace technology related to nailing strip timber flooring onto plywood underlay and timber battens including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to nailing of strip timber flooring
- organisational and site standards, requirements, policies and procedures for nailing strip timber flooring on plywood underlay or timber battens
- types and uses of tools and equipment used during the nailing of strip timber flooring on the plywood underlay and timber battens
- basic wood working techniques relevant to the nailing of timber strip flooring onto

REQUIRED SKILLS AND KNOWLEDGE

- to plywood underlay and timber battens
- workplace safety system requirements relevant to the nailing of strip timber flooring onto plywood underlay and timber battens
- type, characteristics, uses and limitations of:
 - installation adhesives
 - nails or staples
- work flow in relation to the nailing of strip timber flooring onto plywood underlay and timber battens operations
- characteristics and requirements of sub-floor preparation
- environmental protection requirements
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for nailing strip timber flooring on plywood or battens
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete the nailing of strip timber flooring using:
 - top nailing methods
 - secret nailing methods
- Work effectively with others

Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - a realistic timber floor installation requirement
 - workplace location or simulated workplace
 - materials and equipment relevant to the nailing of

EVIDENCE GUIDE	
	<p>strip timber flooring</p> <ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Nail Strip timber flooring onto plywood underlay & battens

- includes tongue and groove strip timber flooring onto plywood underlay and battens which may be over joists, concrete or a sub-floor to either raise a floor or correct the level of a floor.

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • may include PVA, polyurethane, elastomeric
Tools and equipment	<ul style="list-style-type: none"> • are to include secret nailer, top nailer hammer nail punch string line, tape measure, laser line. • may include circular saw, bench saw, straight edge, cramps, clamps, bar scribe, carpenter's pencil and utility knife.
Materials	<ul style="list-style-type: none"> • may include but not be limited to flooring materials, strip timber floor boards, plywood underlay, timber battens, edge strips, timber and metal mouldings, tapes, adhesives, metal fixings, ventilated skirtings, 65 x 2.8 mm, 50 x 2.8 mm bullet head nails, 65 x 2.5 mm, 50 x 2.5 mm T head nails, 50x15 gauge staples, 45x15 gauge staples.
Timber flooring	<ul style="list-style-type: none"> • may include timber plywood underlay manufactured under a JAS-ANZ accredited product certification scheme meeting the internationally recognised ISO Type 5 system for product reliability to AS/NZS 2269
Timber battens	<ul style="list-style-type: none"> • may include timber battens with a density less than or equal to 600Kg/m³, greater than 600Kg/m³

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units		

LMFFL2504A Install expansion joints

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to install expansion joints and gaps, calculate how many and how often they are to be installed plus what size and type are necessary for the application at hand.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at the sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the installation of expansion joints to timber and engineered flooring are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Timber and engineered flooring is assessed for the type, number and installation requirements of expansion joints consistent with Australian Standards, industry standards and manufacturer recommendations</p> <p>1.4. Suitable expansion joints, cover strips, fixings and adhesives, are selected as required.</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the position of each expansion joint, to ensure efficiency and quality of installation</p>
2. Set out expansion joints for installation	<p>2.1. Expansion joints are positioned according to the requirements of the flooring type, manufacturer specifications and Australian Standards.</p> <p>2.2. Timber or metal mouldings or cork expansion strip for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.3. Adhesives and fixings, are prepared for use as required</p> <p>2.4. Working lines and starting point are established</p>
3. Prepare expansion joints	<p>3.1. Instructions and sequence for cutting and fixing are followed</p> <p>3.2. Timber or metal mouldings are laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate</p> <p>3.3. The aesthetics of the materials are maximised where appropriate, matching grains and colours</p> <p>3.4. Timber or metal moulding or cork expansion strip materials are accurately and clearly marked for cutting</p> <p>3.5. Timber or metal moulding or cork expansion strip is</p>

ELEMENT	PERFORMANCE CRITERIA
	cut to length and size for final fixing ensuring minimum waste
4. Install expansion joints	<p>4.1. Timber or metal mouldings or cork expansion strip for fixing are organised and used in accordance with relevant safety management requirements</p> <p>4.2. Adhesives, <i>mechanical fixings</i> are prepared for use as required</p> <p>4.3. Fixing methods and equipment are used following manufacturer recommendations</p> <p>4.4. Timber or metal mouldings or cork expansion strip are fitted to perimeter wall expansion gaps, expansion joints in the body of the flooring or transitions of the timber or engineered flooring</p> <p>4.5. Finished job is inspected and any imperfections are rectified following workplace procedures</p>
5. Complete housekeeping	<p>5.1. Unused materials are stored or recycled as required</p> <p>5.2. Tools and equipment are cleaned and stored appropriately</p> <p>5.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>5.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems in the placement and fitting of expansion joints to timber or engineered flooring to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge and techniques of placement and fitting of expansion joints and cover strips to timber or engineered flooring
- seek learning opportunities
- use the limited workplace technology related to the placement and fitting of expansion joints to timber and engineered flooring including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to placement and fitting of expansion joints to timber and engineered flooring
- organisational and site standards, requirements, policies and procedures for the placement and fitting of expansion joints to timber and engineered flooring
- types, characteristics, uses and limitations of:

REQUIRED SKILLS AND KNOWLEDGE

- the placement and fitting of expansion joints for timber and engineered flooring
- timber or metal mouldings and cork expansion strip when fitting expansion joints to timber and engineered flooring
- types and uses of tools and equipment used during the placement and fitting of expansion joints to timber and engineered flooring.
- basic wood working techniques relevant to the placement and fitting of expansion joints to timber and engineered flooring.
- workplace safety system requirements relevant to the placement and fitting of expansion joints to timber and engineered flooring.
- work flow in relation to the placement and fitting of expansion joints to timber and engineered flooring.
- characteristics and requirements of expansion joint preparation
- environmental protection requirements
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing direct stick timber flooring on battens
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of the placement and fitting of expansion joints to:
 - one strip timber floor
 - one parquetry floor
 - one engineered floating floor
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - a realistic timber or engineered flooring requiring the placement and fitting of expansion joints

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to the placement and fitting of expansion joints • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying

Organisational requirements

- may include but are not limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Expansion joint materials

- may include but not limited to skirtings, scotias, quads, beading, cover strips, threshold strips (end, edge and T mouldings) angle end sections, reducer strips, ramping strips and stair nosings.

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Materials	<ul style="list-style-type: none"> • may include but are not limited to adhesives, metal fixings, timber and metal mouldings and cork expansion strip
Adhesives	<ul style="list-style-type: none"> • are to include PVA, epoxies and polyurethane elastomeric
Mechanical fixings	<ul style="list-style-type: none"> • may include ring grooved nails, pins, staples screws, nylon plug and screws (tap-ins), rawl plugs
Tools and equipment	<ul style="list-style-type: none"> • are to include drop saw, jig saw, hand saw, hack saw, hammer, nail punch, bar scriber and utility knife • may include circular saw, bench saw, straight edge, staple gun

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFFL2505A Install mouldings and edge trims to timber flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to install timber or metal mouldings and trims to timber and engineered flooring after installation, replacement, sanding and finishing.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at the sub-trade and trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational requirements</i> relevant to the fitting and fixing <i>timber and metal mouldings and trims</i> to timber and engineered flooring are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Finished timber/engineered flooring condition is assessed for suitability for installation of timber and metal mouldings and trims consistent with Australian Standards, industry standards and manufacturer recommendations</p> <p>1.4. Suitable <i>adhesives, mouldings, trims</i> and <i>fixings</i> are selected as required.</p> <p>1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials for installation	<p>2.1. Timber or metal mouldings and trims are acclimatised according to manufacturer recommendations</p> <p>2.2. Timber or metal mouldings and trims for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.3. Adhesives and fixings, are prepared for use as required</p> <p>2.4. Working lines and starting point are established</p>
3. Cut mouldings/trims	<p>3.1. Instructions and sequence for cutting and fixing are followed</p> <p>3.2. Timber or metal mouldings and trims are laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate</p> <p>3.3. The aesthetics of the materials are maximised where appropriate, matching grains and colours</p> <p>3.4. Timber or metal moulding and trim materials are accurately and clearly marked for cutting</p> <p>3.5. Timber or metal moulding and trim is cut to length and size for final fixing ensuring minimum waste</p>

ELEMENT	PERFORMANCE CRITERIA
4. Fix mouldings /trims	<p>4.1. Timber or metal mouldings and trims for fixing are organised and used in accordance with relevant safety management requirements</p> <p>4.2. Adhesives, <i>mechanical fixings</i> and accessories are prepared for use as required</p> <p>4.3. Fixing methods and equipment are used following manufacturer recommendations</p> <p>4.4. Skirting boards/mouldings are fitted to perimeter walls expansion joints are allowed</p> <p>4.5. Cover trims and edge strips are fitted/re-fitted to expansion joints and transitions of the timber flooring</p> <p>4.6. Finished job is inspected and any imperfections are rectified following workplace procedures</p>
5. Complete housekeeping	<p>5.1. Unused materials are stored or recycled as required</p> <p>5.2. Tools and equipment are cleaned and stored appropriately</p> <p>5.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>5.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing mouldings and edge trims to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - fitting and fixing timber and metal mouldings and trims to timber flooring techniques
- seek learning opportunities
- use the limited workplace technology related to the fitting and fixing timber and metal mouldings and trims to timber flooring, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to fitting and fixing timber and metal mouldings and trims to timber and engineered flooring
- Organisational and site standards, requirements, policies and procedures for the fitting and fixing timber and metal mouldings and trims to timber and engineered flooring

REQUIRED SKILLS AND KNOWLEDGE

- Types, characteristics, uses and limitations of:
 - adhesives and mechanical fixings used to install timber and metal mouldings and trims fitted to timber and engineered flooring
 - timber and metal mouldings and trims for fixing to timber and engineered flooring
- Types and uses of tools and equipment used during the fitting and fixing timber and metal mouldings and trims to timber flooring
- Basic wood working techniques relevant to the fitting and fixing of timber and metal mouldings and trims to timber flooring
- Workplace safety system requirements relevant to the fitting and fixing timber and metal mouldings and trims to timber flooring
- work flow in relation to the fitting and fixing timber and metal mouldings and trims to timber flooring
- characteristics and requirements of sub-floor preparation
- environmental protection requirements
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing direct stick timber flooring on battens
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of two installations of the following mouldings and trims types:
 - skirting boards
 - scotia
 - edge and end mouldings
 - metal cover strips
 - stair nosing
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • realistic mouldings and edge trim installation requirement • workplace location or simulated workplace • materials and equipment relevant to installing direct stick timber flooring • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Timber and metal mouldings and trims

- may include but not limited to skirtings , scotias, quads, beading, cover strips, threshold strips (end, edge and T mouldings) angle end sections, reducer strips, ramping strips and stair nosings.

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • are to include PVA, epoxies and polyurethane elastomeric
Tools and equipment	<ul style="list-style-type: none"> • are to include drop saw, jig saw, hand saw, hack saw, hammer, nail punch, bar scriber and utility knife • may include circular saw, bench saw, straight edge, staple gun
Materials	<ul style="list-style-type: none"> • may include but not be limited to adhesives, metal fixings, timber and metal mouldings and trims
Mechanical fixings	<ul style="list-style-type: none"> • may include ring grooved nails, pins, staples screws, nylon plug and screws (tap-ins), rawl plugs

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFFL3001A Plan and cost flooring technology work

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcome required to identify and analyse work requirements, to plan the work including identification of all resources and to cost the work as a part of a tender or quotation.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and analyse work requirements	1.1. Applicable <i>legislative</i> , <i>OHS</i> and <i>organisational</i> requirements relevant to the planning and costing of flooring technology work are verified and complied with 1.2. Details of customer requirements are obtained through discussion with customer or from <i>information</i> required 1.3. Details of the <i>site conditions</i> are confirmed from reports or physical inspection 1.4. Details of products and/or services required for the work are identified, developed and quantified 1.5. Delivery point and methods of transportation are determined 1.6. Details are recorded in accordance with enterprise practice
2. Develop a work plan	2.1. The technical and material options for completing the work are identified and considered 2.2. The outline work proposal is confirmed with the client and amended as necessary 2.3. <i>A detailed work plan</i> is developed and recorded
3. Estimate materials, time and labour	3.1. Types and quantities of <i>materials</i> required for the work plan are calculated 3.2. Types and duration of usage of major <i>tools and equipment</i> required to support the work plan are calculated 3.3. <i>Labour</i> requirements to support the preparation for and implementation of the work plan are calculated 3.4. Time requirements to complete the work plan are estimated
4. Calculate costs	4.1. Total materials, labour and equipment costs are calculated in accordance with enterprise procedures 4.2. Total job cost is calculated, including overheads and mark-up percentages 4.3. Final cost to customer is calculated
5. Document details and verify where necessary	5.1. Details of job costs and charges are documented in accordance with enterprise practice 5.2. Calculations, costs or other details are verified in accordance with enterprise practice 5.3. Customer quotation is prepared

ELEMENT	PERFORMANCE CRITERIA
	5.4. Details are documented for future reference in accordance with enterprise practice

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, work plans and safety procedures
- communicate ideas, information and advice to client to enable confirmation of work requirements, plans and specifications
- document quotations and tender support schedules
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- apply inspection and analysis techniques to anticipate work problems and plan around these
- recognise and respond to circumstances outside instructions or personal competence
- adopt a proactive relationship with the client
- plan activities covering the choice of work method, the preparation and layout of the worksite, the identification of equipment and materials and the incorporation of these into a work plan
- use mathematical ideas and techniques to correctly complete measurements, estimate material, labour and overhead requirements and accurately cost the product/service
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the workplace technology related to the planning and costing of the work including measuring devices, calculators and computing services

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the planning and costing of flooring technology work
- AS/NZS 2455 and AS1884 (1985)
- preparing and presenting design information
- organisational and site standards, requirements, policies and procedures for preparing and presenting design information

REQUIRED SKILLS AND KNOWLEDGE

- floor preparation methods and techniques
- floor covering, installation and finishing techniques applicable to the required streams
- types of major tools and equipment, their applications, planning and costing techniques and data
- costing techniques for labour and materials
- overhead components and costing techniques
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for planning and costing flooring operations
- Interpret specifications and instructions for products and materials to be used
- Interpret work orders
- Document and communicate work-related information including: customer requirements, products, materials and labour required, costing calculations for products, materials and labour, and special conditions
- Use of calculators, computer programs and other aids in the estimation and cost calculation processes
- Estimate and cost three varied jobs including:
 - estimate quantities of material required
 - determine the types and amount of labour required to complete the work
 - estimate time required to complete the work
 - estimate overheads associated with the job
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - a realistic planning and costing requirement
 - a customer requiring technical, planning and

EVIDENCE GUIDE	
	<p>costing advice</p> <ul style="list-style-type: none"> • specific information covering materials, equipment, labour and overheads required for the planning and costing work • specifications and work instructions • details of the work requirements and options
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with other related units of competency e.g. Inspect sub-floors</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Information	<ul style="list-style-type: none"> Enterprise work orders and instructions Industry codes and symbols Product designs, patterns and prototypes Building/architectural plans Australian, international and enterprise quality

RANGE STATEMENT	
	<p>standards and procedures</p> <ul style="list-style-type: none"> • Work scheduling documentation • Job Procedures
Site conditions	<ul style="list-style-type: none"> • may include access requirements, building project status, power supply, lighting, temperature, humidity, heating/cooling requirements, ventilation, other site-based activities and security arrangements
Detailed Work Plan	<ul style="list-style-type: none"> • is to provide sufficient detail for an auditable costing of the work and is to cover: <ul style="list-style-type: none"> • work area isolation/protection • work permits as applicable • work timings and program • floor preparation • covering/installation • finishing • personnel and timings by labour type • transportation methods and costs
Materials	<ul style="list-style-type: none"> • may include those applicable to the particular stream and work requirements: <ul style="list-style-type: none"> • floor preparation materials may include primers, cementitious products, aggregates, sands • carpeting materials may include floor covering protection materials, underlay, carpet cushion, gripper strips, metal mouldings, PVC fittings, carpet, adhesives and primers • resilient flooring materials may include floor covering protection materials, linoleum, vinyl, rubber, adhesives, primers, PVC and metal mouldings • polishing and finishing materials may include floor covering protection materials, coatings, catalysts, fillers, discs, belts and other consumables • timber flooring materials include floor covering protection materials, timber product and fixings
Tools and equipment	<ul style="list-style-type: none"> • may include those applicable to the particular stream and work requirements:

RANGE STATEMENT	
	<ul style="list-style-type: none"> • floor preparation may include grinders, scarifiers, demolition equipment, compressors, generators • carpet laying operations may include hoisting and cartage, generators, compressors • resilient flooring operations may include hoisting and cartage, generators, compressors • polishing and finishing operations may include edge sander, floor sander (belt or split drum), rotary sander, orbital sander, generators, compressors • timber flooring may include nail gun, generators, compressors
Labour requirements	<ul style="list-style-type: none"> • are to cover normal and overtime estimates and include both direct and indirect costs covering employees and contractors

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	General
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Co-requisite units

Co-requisite units		

LMFFL3002A Establish and maintain a safe flooring technology work environment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to conduct a systematic risk assessment of the work and work area and to establish and maintain a safe work environment throughout the conduct of flooring technology operations.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and interpret operational and environmental information	1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the establishment and maintenance of a safe work environment are verified and complied with 1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process which will be undertaken to complete work tasks 1.3. <i>Tools and equipment</i> to be used are identified and their operating characteristics are analysed 1.4. The flooring <i>materials</i> to be used, including <i>adhesives</i> are identified and their characteristics analysed
2. Identify hazards	2.1. Work area conditions are analysed to identify/recognise potential <i>hazards</i> 2.2. Relevant safety systems information is accessed and analysed to eliminate situations covered by existing and adequate procedures 2.3. The type and scope of unresolved hazards and their likely impact are recognised
3. Assess risk	3.1. Likelihood of the event happening is considered and determined 3.2. Consequence if the event should occur is evaluated and determined 3.3. Risk level (likelihood and consequence combined) is considered and determined
4. Identify and decide on risk treatment	4.1. Range of <i>treatments</i> which may eliminate or minimise the risk are identified 4.2. All possible options for resolution of the problem/dealing with the risk are identified and considered 4.3. Feasible options are subject to detailed analysis including the identification of resource requirements 4.4. Most appropriate treatment for dealing with the situation is selected
5. Implement the risk treatment	5.1. The course of action /treatment is planned and prepared in detail 5.2. Resources required for the treatment are acquired or obtained 5.3. Safety information and procedures are accessed and applied throughout the operations

ELEMENT	PERFORMANCE CRITERIA
	5.4. The treatment is implemented 5.5. Information on the treatment and implementation is communicated to the relevant people

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate possible hazards
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of treatment equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the workplace technology related to the risk management including tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to risk management in a flooring technology work environment
- organisational and site standards, requirements, policies and procedures for flooring technology
- types of tools and equipment, their operating characteristics and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- common flooring technology related hazards and the range of commonly applied treatments

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• environmental protection requirements• established communication channels and protocols• problem identification and resolution• appropriate mathematical procedures for estimation and measurement• procedures for the recording, reporting and maintenance of workplace records and information |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for risk management in a flooring technology work environment
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of one formal risk assessment, including the determination and implementation of required treatments
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to establishing and maintaining a safe flooring technology work environment
 - specifications and work instructions

EVIDENCE GUIDE**Method of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling, including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Instructions

- Workplace procedures relating to the use and operation of tools and equipment
- Workplace instructions, including job sheets, plans, drawings and designs
- Workplace procedures relating to reporting

RANGE STATEMENT	
	<p>and communications</p> <ul style="list-style-type: none"> • Manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • may include knives, angle grinder, scrapers, saws, hammers, mallets and chisels, staple gun, bolsters, hand brush and brooms, vacuum cleaners, trowels, scribes, rollers, spatulas, gauging tools, laser levels, sealers, drills, mixing paddles, gas bottle and gun, hot air welding gun, drop saw, nail gun, buckets, moisture meters and material pumps • equipment and machines may include grinders, demolition equipment, scarifiers, shot blasters and cutting equipment
Materials	<ul style="list-style-type: none"> • are to include but are not limited to soft underlays, carpet gripper strips, metal mouldings, tapes, adhesives, nails, plug, staples and primers
Adhesives	<ul style="list-style-type: none"> • may include solvent and water-based contact, construction adhesive, latex/resin/acrylic
Hazards and risks	<ul style="list-style-type: none"> • may include dust inhalation, power sources and leads, flying debris, fume inhalation, trips, falls, lack of control during pouring, machine safety, vibration (direct and indirect consequences)
Treatments	<ul style="list-style-type: none"> • may include the following: <ul style="list-style-type: none"> • dust and fumes extraction systems • isolation through testing, distance, barriers, entry limits, signage • power source protection such as earth leakage, coded leads • debris protections such as machine guards, skirts, distance, access controls • pour protection through area sealing and plugs

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	General
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Co-requisite units

Co-requisite units		

LMFFL3101A Inspect sub-floors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to inspect and formally report on the condition of both timber and concrete sub-floors.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the inspection of sub-floors are verified and complied with</p> <p>1.2. Customer enquiry and <i>relevant information</i> is consulted to determine the type of proposed flooring operation and other work requirements</p> <p>1.3. Floor surface requirements for the proposed coverings are determined from manufacturer or workplace information</p> <p>1.4. <i>Tools, equipment</i> and required <i>materials</i> are obtained and prepared for the work</p>
2. Conduct inspection of timber flooring	<p>2.1. The type of floor construction materials and the building floor structure and substructure are identified</p> <p>2.2. <i>Datum lines</i> are run and checked to confirm dimensions</p> <p>2.3. Moisture testing is completed in accordance with the approved process and standard</p> <p>2.4. <i>Timber sub-flooring inspections</i> are completed to identify irregularities</p> <p>2.5. Ventilation flow is confirmed and irregularities noted</p> <p>2.6. Floor joists, bearers and stumps are checked for irregularities</p>
3. Conduct inspection of concrete flooring	<p>3.1. The type of floor construction materials and the building floor structure and substructure are identified</p> <p>3.2. Datum lines are run and checked to confirm dimensions</p> <p>3.3. Moisture testing is completed in accordance with the approved process and standard</p> <p>3.4. <i>Concrete sub floor inspections</i> are completed to identify irregularities</p> <p>3.5. Expansion joints are inspected to ensure they are clean and unobstructed</p>
4. Notify findings of inspection	<p>4.1. <i>Notification</i> of the findings of the inspection is completed in accordance with the current and relevant standards</p> <p>4.2. Copies of the notification are sent to appropriate personnel and suitably filed following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of inspection outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate sub-floor inspection problems to avoid re-work and wastage
- diagnose and identify the causes and consequences of sub-flooring irregularities
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the workplace technology related to the inspection of sub-floors including tools, equipment, calculators and measuring devices.

Required knowledge

- workplace safety system requirements related to floor inspection
- type, characteristics and defects of:
 - timber sub-floor structures
 - concrete sub-floor structures
- types and uses of inspection tools and equipment and procedures for their safe use, operation and maintenance
- requirements for floor condition for floor coverings

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• characteristics and requirements of sub-floor preparation• work flow in relation to inspection processes and procedures |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for sub-floor inspection
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of:
 - one timber sub-floor inspection and written notification
 - one concrete sub-floor inspection and written notification
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - testing equipment, tools and materials relevant to sub-floor inspection
 - specifications and work instructions

EVIDENCE GUIDE**Method of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other related units of competency, e.g. Plan and cost flooring technology work

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Relevant information	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment Workplace instructions, including job sheets, plans, drawings and designs Workplace procedures relating to notification

RANGE STATEMENT	
	<p>and communications</p> <ul style="list-style-type: none"> • Manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • are to include straight edges (150 mm - 3m), spirit level, string line, chalk line, electrical resistance meter, tape measure, laser level, dumpy, measuring pole, water level, hygrometer, thermometer probe, acid and alkaline testing equipment, electric drill and masonry drill bits
Materials	<ul style="list-style-type: none"> • may include timber strip flooring, construction sheet flooring, concrete floors, above grade, on grade and below grade floors
Datum line checks	<ul style="list-style-type: none"> • are used to confirm floor fall, dips and irregularities and finished floor height in relation to other floor coverings and door clearances
Timber sub-flooring inspections	<ul style="list-style-type: none"> • are to include tests for moisture content, protruding nails, loose metal and other objects, cracked, loose or damaged boards, rotting, insect attack and cross flow ventilation
Concrete sub-floor inspection	<ul style="list-style-type: none"> • are to include checks for any protruding obstacles, for cracks or damage, moisture, damage to expansion joint, concrete surface for weakness or damage and for the presence of during agents
Inspection notifications	<ul style="list-style-type: none"> • are to cover the type of the inspection completed, testing methods used, inspection findings, suggested remedies to any faults identified and recommendations for floor coverings or finishing

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Floor preparation
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Co-requisite units

Co-requisite units	

LMFFL3102A Prepare, select and apply screed to concrete sub-floors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to prepare, select and apply cementitious products using screeding techniques to concrete sub-floors prior to the installation of flooring coverings and coatings for internal and external applications.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for the work	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to <i>sub-floor preparation</i> are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. Sub-floors are inspected to ensure that they are dry, smooth, plane, sound and clean in accordance with ASNZS 2455.2 (1995) and AS 1884 (1995) and the extent of preparation is confirmed</p> <p>1.4. Trial applications of surface materials are made to determine suitability of the primer to the sub-floor, and the appropriateness of the screed compounds to <i>level requirements</i>, and compatibility to the primer</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Material safety data sheets, or equivalent, are read and applied during the work</p> <p>1.7. Materials and equipment are prepared and positioned for use</p> <p>1.8. Surfaces are cleaned in accordance with manufacturer recommendation</p>
2. From a datum line, define the grading, ramping and set downs	<p>2.1. Establish grid and mark the floor</p> <p>2.2. Drill for and position pin height</p> <p>2.3. Clean sub-floor</p> <p>2.4. Establish existing height and the height of finished ramp to the required threshold</p> <p>2.5. Establish the width of the ramp appropriate to the height of the finished threshold and in accordance with building codes and client requirements</p> <p>2.6. Establish existing height and the height of finished floor waste to the required threshold</p> <p>2.7. Establish height of finished floor at the perimeter</p> <p>2.8. Establish height of the finished floor at the floor waste/drain</p>
3. Repair defects in sub-floor (including expansion joints)	<p>3.1. Establish extent of repairs required</p> <p>3.2. Remove unsound material and debris</p> <p>3.3. Determine type of materials to be used</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4. Prime affected area 3.5. Mix and install repair compound 3.6. Inspect completed work to ensure functionality is restored and the finish is plane and smooth
4. Treatment of expansion/control joints	4.1. Establish the extent of repair 4.2. Remove unsound material and debris to ensure the mechanics of the control/expansion joint are unimpeded 4.3. Prepare joint to ensure that repair compound does not impede the function of control/expansion joint 4.4. Prime affected area 4.5. Mix and install repair compound 4.6. Inspect completed work to ensure functionality of the control/expansion joint is not impeded 4.7. Recut the expansion/control joint as required
5. Apply primers and screed compounds	5.1. Surface coating is applied with the depth and coverage in accordance with manufacturer specifications and job requirements 5.2. Levelled floor is checked and cleared for further processing
6. Complete housekeeping	6.1. Unused materials are stored or recycled as required 6.2. Tools and equipment are cleaned and stored appropriately 6.3. Work area is cleaned and rubbish disposed of appropriately 6.4. Workplace documentation and/or reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate concrete sub-floor preparation problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the preparation of a concrete sub-floor including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to levelling sub-floors
- organisational and site standards, requirements, policies and procedures for levelling sub-floors
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

maintenance

- characteristics of materials, products and defects
- set up and operation of equipment
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- characteristics and requirements of concrete sub-floor preparation
- type, characteristics, uses and limitations of levelling compounds and primers
- workplace safety system requirements related to the application of levelling compounds and primers

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Complete to Australian Standards a minimum of two sub-floor preparations which are to include:
 - a patch and repair
 - a level pour
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to sub-floor levelling activities
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of

EVIDENCE GUIDE

	<p>workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other related units of competency</p>
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Instructions

- Workplace procedures relating to the use and operation of tools and equipment
- Workplace instructions, including job sheets, plans, drawings and designs
- Workplace procedures relating to reporting

RANGE STATEMENT	
	and communication <ul style="list-style-type: none"> • Manufacturer instructions for the use of equipment and materials
Sub-floor preparation	<ul style="list-style-type: none"> • concrete sub-floor preparation may include sanding, grinding and the application of levelling compounds and primers
Level requirements	<ul style="list-style-type: none"> • may refer to plane, falls to waste, and/or ramps to thresholds

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Floor Preparation
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Co-requisite units

Co-requisite units		

LMFFL3201A Install carpet tiles using custom designs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to install carpet tiles to multiple connecting rooms and/or large commercial sites using multi directional patterns, motifs, logos and custom design requirements, including the preparation, layout, cutting, laying and fixing of carpet tiles.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the installation of <i>carpet tiles</i> using standard installation procedures are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Sub-floor condition is assessed for installation of carpet tiles</p> <p>1.4. Suitable adhesives, trims and accessories are selected</p> <p>1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials	<p>2.1. Carpet tiles to be installed are checked against order</p> <p>2.2. Carpet tiles are acclimatised according to manufacturer recommendations</p> <p>2.3. Materials for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.4. Set out patterns, motifs, logos and custom design requirements</p> <p>2.5. Working lines and starting point are established</p>
3. Lay floor covering	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Materials are laid out to meet specification requirements and to minimise waste</p> <p>3.3. Material grains and patterns are matched or contrasted as appropriate</p> <p>3.4. Tiles are accurately and clearly marked for cutting</p> <p>3.5. Tiles are cut to required shape with minimum waste of materials and laid</p> <p>3.6. Complete installation is checked for flaws in installation and materials and faults are rectified</p>
4. Complete housekeeping	<p>4.1. Unused materials are stored or recycled as required</p> <p>4.2. Tools and equipment are cleaned and stored appropriately</p>

ELEMENT	PERFORMANCE CRITERIA
	4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing carpet tiles using custom design requirements to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installing of carpet tiles using custom design requirements including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing carpet tiles using custom design requirements
- organisational and site standards, requirements, policies and procedures for installing carpet tiles using custom design requirements
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- types, characteristics, uses and limitations of:
 - carpet tiles
 - carpet tile installation adhesives
- types and uses of carpet tile installation tools and equipment
- workplace safety system requirements related to carpet tile laying
- characteristics and requirements of sub-floor preparation
- work flow in relation to floor covering operations

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the installation of carpet tiles requirements
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of:
 - one carpet installation to multiple connecting rooms using multi-directional patterns/borders including appropriate trims and accessories
 - one full-spread installation that includes a motif/logo and including appropriate trim and accessories
 - one full-spread installation to large commercial site that includes a link-up and custom design requirement, including appropriate trims and accessories
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to laying carpet tiles according to custom design • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Carpet tiles

- may include backed or un-backed, fixed or un-fixed, wool, synthetic or combination of fibres, pile, needle-punch, tufted, fusion bonded and woven, modular and square to one metre

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • are to include pressure sensitive and wet acrylics, water and solvent based contacts and double sided-tape
Tools and equipment	<ul style="list-style-type: none"> • are to include utility knife, straight edge, square, chalk-line, tape measure, hacksaw, serrated trowel, hammer and napping shears
Materials	<ul style="list-style-type: none"> • are to include but are not limited to carpet tiles, trims, stair nosings, skirting, reducing and edge strips, adhesive and tapes

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Carpets
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Co-requisite units

Co-requisite units	

LMFFL3202A Install adhesive fixed carpet floor coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to install adhesive fixed carpet floor coverings including preparation, cutting, laying, fixing, joining and finishing of direct stick and dual-bonded installation methods.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to install <i>adhesive fixed carpet</i> floor coverings are verified and complied with</p> <p>1.2. Floor inspection report is consulted to confirm suitability of floor for carpet installation</p> <p>1.3. Instructions and/or plans/sketches are read and interpreted to identify the process required to complete work tasks</p> <p>1.4. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.5. Suitable perimeter finishing, joining materials, metal mouldings, cover and PVC strips are selected and prepared</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p> <p>1.7. Suitable primers and <i>adhesives</i> are selected and prepared for the installation</p>
2. Set out materials	<p>2.1. Carpet to be installed is checked against order</p> <p>2.2. Adhesive fixed carpet floor coverings are acclimatised according to manufacturer recommendations</p> <p>2.3. Underlay and carpet to be installed is checked against work instruction and appropriate standards</p> <p>2.4. Apply appropriate primers to the sub-floors</p>
3. Lay floor coverings	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Underlay is cut and installed to specification</p> <p>3.3. Carpet pieces are laid out and checked for size, direction of pile and pattern</p> <p>3.4. Carpet is trimmed to shape as necessary, joins are cut, sealed and installed following manufacturer instructions and Australian Standards</p> <p>3.5. Adhesives are applied following manufacturer instructions</p> <p>3.6. Carpet is installed following manufacturer instructions and Australian Standards</p> <p>3.7. Cover and finishing strips are appropriately fixed for the type of sub floor</p>

ELEMENT	PERFORMANCE CRITERIA
	3.8. Protective coverings are installed as specified 3.9. Finished work is inspected for compliance with work order, workplace and Australian Standards of finish
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems in the installation of adhesive fixed carpets and underlays to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installation of adhesive fixed carpets and underlays including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to adhesive fixed carpet and underlays carpet systems
- organisational and site standards, requirements, policies and procedures for adhesive fixed carpet and underlay carpet system
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- types, characteristics, uses and limitations of:
 - adhesive fixed carpets and underlays
 - installation adhesives
- types and uses of adhesive fixed carpet installation tools and equipment
- workplace safety system requirements, including ventilation needs, related to the installation of adhesive fixed carpets
- characteristics and requirements of sub-floor preparation
- work flow in relation to the cutting, laying, fixing, joining and finishing of adhesive fixed carpet

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for laying adhesive fixed carpet and underlay
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Complete a minimum of the following:
 - one direct stick carpet installation using a PVC backed carpet to connecting rooms, including at least one cross join and one seam join
 - one dual-bond carpet installation using a woven carpet to connecting rooms, including at least one cross join and one seam join
 - one dual-bond carpet installation using tufted carpet and pre-applied adhesive underlay to connection rooms, including at least one cross join and one seam join using gripper strips and heat bond tape
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge,

EVIDENCE GUIDE	
	<p>other than confirmatory questions, will usually be conducted in an off-site context</p> <ul style="list-style-type: none"> • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to lay adhesive fixed carpet floor coverings • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Adhesive fixed carpet	<ul style="list-style-type: none"> may include: tufted carpet, fusion-bonded carpet, woven carpet, needle punched carpet, foams backed carpet, rubber-backed, PVC backed carpet, SBR latex foam underlay, fibrous and bonded foam underlays

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> are to include knee kicker, water roller, carpet wall trimmer, carpet stair tool, hammer, tape measure, trimming knife, spiked carpet roller, carpet spreader, notched trowels and paint rollers, carpet shears, napping shears, loop pile cutter, cushion backed cutter, heat seaming irons, electrical leads, seaming board, heat seaming tapes, seam sealer and earth leakage device
Materials	<ul style="list-style-type: none"> may include but are not limited to architectural gripper strips, metal mouldings, cover strips, PVC trims and primers
Adhesives	<ul style="list-style-type: none"> may include: plasticised and rubber resin acrylic, water and solvent based adhesives and solvent based contact adhesive

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Carpet
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Co-requisite units

Co-requisite units	

LMFFL3203A Install commercial carpet floor coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competencies required to install commercial grade carpet to multiple connecting rooms, large commercial areas, multi-storey buildings, including preparation, cutting, layout, joining, power stretching and finishing of carpet floor coverings.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to install <i>commercial carpet floor covering</i> are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. Resources required in terms of labour, equipment, materials, transport, site loading and hoisting, storage facilities, air conditioning, heating, lighting, power supply, security and time are assessed</p> <p>1.4. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.5. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials	<p>2.1. Carpet to be installed is checked against order</p> <p>2.2. Commercial carpet floor coverings are acclimatised according to manufacturer recommendations</p> <p>2.3. Type of perimeter finishing, joining materials, gripper strip, metal mouldings and cover strips are selected following specification or work order</p> <p>2.4. Underlay, gripper strips and metal mouldings are inspected to confirm correct fitting</p> <p>2.5. Work area is cleared of scraps or other contaminants</p> <p>2.6. Working lines and starting point are established</p>
3. Lay floor covering	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Carpet pieces are laid out and checked for size, direction of pile</p> <p>3.3. Stretching equipment, joining and fixing methods are used following manufacturer instructions and Australian Standards</p> <p>3.4. Cover and finishing strips are suitably fixed for the type of sub floor</p> <p>3.5. Protective coverings are installed as specified</p> <p>3.6. Finished work is inspected for compliance with work order, workplace and Australian Standards of finish</p>
4. Complete housekeeping	<p>4.1. Unused materials are stored or recycled as required</p> <p>4.2. Tools and equipment are cleaned and stored</p>

ELEMENT	PERFORMANCE CRITERIA
	appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation and/or reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems in the installation of commercial carpet floor coverings to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installation of commercial carpet floor coverings including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installation of commercial carpet
- organisational and site standards, requirements, policies and procedures for the installation of commercial carpet
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- characteristics and requirements for underlays
- type, characteristics, uses and limitations of commercial carpets
- techniques for:
 - stretching and joining carpet
 - the use of Velcro and equivalent systems
- workplace safety system requirements related to carpet installation
- work flow in relation to preparation, layout, stretching, cutting and finishing of carpet

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing commercial carpet
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Complete a minimum of:
 - commercial tufted carpet installation using the carpet gripper strip system to an area containing at least three rooms connected by a common corridor including at least three seam joins and three cross joins
 - commercial woven carpet installation using the carpet gripper strip system to an area containing at least three and a half broadloom widths of carpet by approximately ten metres in length and including at least one cross join
 - commercial tufted carpet installation using the carpet gripper strip system to an area of a minimum of fifteen lineal metres by twelve lineal metres containing a lift lobby or similar obstacle
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge,

EVIDENCE GUIDE	
	<p>other than confirmatory questions, will usually be conducted in an off-site context</p> <ul style="list-style-type: none"> • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to laying commercial carpet floor covering • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Commercial carpet floor coverings	<ul style="list-style-type: none"> may include tufted carpet, woven carpet and fusion bonded carpet
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Work instructions, including job sheets, plans, drawing and designs • Workplace procedures relating to reporting and communication • Manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • are to include carpet knee kicker, power stretcher, carpet stair tool, hand trucks, carpet trolleys, hammer, utility knife, hook knife, carpet wall trimmer, heat seam iron, spiked carpet roller, weight or seam roller, awl, carpet spreader, carpet shears, napping shears, loop pile cutter, cushion backed cutter, moulding lifter and sewing needle
Materials	<ul style="list-style-type: none"> • may include but are not limited to commercial architectural carpet gripper strips, metal mouldings and PVC trims, heat seam tape, hessian tape, thread and adhesives

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Carpet
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Co-requisite units

Co-requisite units		

LMFFL3204A Install patterned carpet floor coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competencies required to install woven and tufted carpet floor coverings containing geometric and decorative patterns using adhesive bonded and carpet gripper systems.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to install <i>patterned carpet floor covering</i> are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. Resources required in terms of labour, equipment, materials, transport, site loading and hoisting, storage facilities, air conditioning, heating, lighting, power supply, security and time are assessed</p> <p>1.4. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.5. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials	<p>2.1. Carpet to be installed is checked against order</p> <p>2.2. Patterned carpet floor coverings are acclimatised according to manufacturer recommendations</p> <p>2.3. Type of perimeter finishing, joining materials, gripper strip, metal mouldings and cover strips are selected following specification or work order</p> <p>2.4. Underlay, gripper strips and metal mouldings are inspected to confirm correct fitting</p> <p>2.5. Work area is cleared of scraps or other contaminants</p> <p>2.6. Work lines and starting point are established</p>
3. Lay floor covering	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Carpet pieces are laid out and checked for size, direction of pile</p> <p>3.3. Stretching equipment, joining and fixing methods are used following manufacturers' instructions and Australian Standards</p> <p>3.4. Cover and finishing strips are suitably fixed for the type of sub floor</p> <p>3.5. Protective coverings are installed as specified</p> <p>3.6. Finished work is inspected for compliance with work order, workplace and Australian Standards of finish</p>
4. Complete housekeeping	<p>4.1. Unused materials are stored or recycled as required</p> <p>4.2. Tools and equipment are cleaned and stored</p>

ELEMENT	PERFORMANCE CRITERIA
	appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation and/or reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems in the installation of patterned carpet to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installation of patterned carpet, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the installation of patterned carpet
- organisational and site standards, requirements, policies and procedures for the installation of patterned carpet
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

maintenance

- characteristics of materials, products and defects
- set up and operation of equipment
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- characteristics and requirements for underlays
- type, characteristics, uses and limitations of patterned carpets
- types and uses of carpet installation tools, equipment and materials
- techniques for:
 - stretching and joining carpet
 - adhesive bonding and joining of carpets
 - the use of Velcro and equivalent systems
- workplace safety system requirements related to carpet installation
- work flow in relation to preparation, layout, stretching, cutting and finishing of carpet

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing patterned carpet floor coverings
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Complete a minimum of:
 - installation of woven patterned carpet requiring pattern matching at seams and cross joints using the carpet gripper strip installation system
 - installation of tufted patterned carpet requiring pattern matching at seams and cross joints using the carpet gripper strip installation system
 - installation of tufted patterned carpet using adhesive bonded methods of installation including pattern matching at seams and cross joints
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or

EVIDENCE GUIDE	
	<p>Australian Standards requirements</p> <ul style="list-style-type: none"> • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to installing patterned carpet floor coverings • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Patterned carpet floor coverings	<ul style="list-style-type: none"> may include tufted carpet, woven carpet and fusion bonded carpet
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools Work instructions, including job sheets, plans,

RANGE STATEMENT	
	drawing and designs <ul style="list-style-type: none"> • Workplace procedures relating to reporting and communication • Manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • are to include carpet knee kicker, power stretcher, carpet stair tool, hand trucks, carpet trolleys, hammer, utility knife, hook knife, carpet wall trimmer, heat seam iron, spiked carpet roller, weight or seam roller, awl, carpet spreader, carpet shears, napping shears, loop pile cutter, cushion backed cutter, moulding lifter and sewing needle
Materials	<ul style="list-style-type: none"> • may include but are not limited to commercial architectural carpet gripper strips, metal mouldings and PVC trims, heat seam tape, hessian tape, thread and adhesives

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Carpet
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Co-requisite units

Co-requisite units	

LMFFL3205A Install custom design carpet and decorative finishes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to install carpet floor coverings containing logos, motifs and custom design concepts to walls and floors including preparation, layout, stretching cutting, joining and finishing of carpet.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the installation of <i>custom design carpet floor coverings</i>, are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Resources required in terms of labour, equipment, materials and time are assessed</p> <p>1.4. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.5. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials	<p>2.1. The carpet to be installed and design requirements are checked against work orders</p> <p>2.2. Carpet is acclimatised according to manufacturer recommendations</p> <p>2.3. Type of perimeter finishing, joining materials, gripper strips, metal mouldings and cover strips are selected following specification or work order</p> <p>2.4. Underlay gripper strips and metal mouldings are inspected to confirm correct fitting</p> <p>2.5. Work area is cleared of scraps or other contaminants</p> <p>2.6. Work lines and starting point are established</p>
3. Install floor covering	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Patterns, motifs, logos and custom design requirements are set-out</p> <p>3.3. Carpet pieces are laid out and checked for size, direction of pile and pattern match</p> <p>3.4. Carpet pieces are accurately and clearly marked for cutting</p> <p>3.5. Carpet pieces are cut to required shape with minimum waste of materials</p> <p>3.6. Carpet pieces are joined using joining and installation methods appropriate to the installation system being used</p> <p>3.7. Carpet installation methods are to follow manufacturer instructions and Australian Standards</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.8. Cover and finishing strips are suitably fixed for the type of installation method, floor covering and sub floor</p> <p>3.9. Complete installation is checked for flaws in installation and materials and faults rectified</p> <p>3.10. Floor covering protection is installed as per specifications</p>
4. Complete housekeeping	<p>4.1. Unused materials are stored or recycled as required</p> <p>4.2. Tools and equipment are cleaned and stored appropriately</p> <p>4.3. Work area is cleaned and rubbish disposed of appropriate</p> <p>4.4. Workplace documentation and/or reports are completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems when installing custom design carpets and decorative finishes to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installation of custom designed carpets and decorative finishes including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the installation of custom design carpet and decorative finishes
- organisational and site standards, requirements, policies and procedures for the installing of custom design carpet
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- characteristics and requirements for underlays
- type, characteristics, uses and limitations of pattern carpets
- types and uses of carpet installation tools, equipment and materials
- techniques for:
 - stretching and joining carpet
 - adhesive bonding and joining of carpet
 - the use of Velcro and equivalent systems
- workplace safety system requirements related to carpet installation
- work flow in relation to preparation, layout, stretching, cutting and finishing of carpet

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing custom designed carpet and decorative finishes
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Complete a minimum of:
 - one installation of a needle punch carpet to wall or floor, containing a logo/motif using adhesive bonded installation systems
 - installation of a tufted carpet containing a motif and custom design concepts using the carpet gripper strip system of installation
 - installation of a woven carpet containing a motif and custom design concepts (bordered installation) and pattern matching, using the dual-bond system of installation
 - one installation of PVC backed carpet to a floor, containing a logo/motif and custom design concepts using adhesive bonded installation systems
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and

EVIDENCE GUIDE	
	<p>environmental constraints</p> <ul style="list-style-type: none"> • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to installing custom design carpet and decorative finishes • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Custom design carpet floor coverings	<ul style="list-style-type: none"> may include tufted carpet, woven carpet and fusion bonded carpet, needlepunch carpet, PVC backed carpet, boned foam underlay, SBR foam underlay, needlepunched fibre underlay

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools • Work instructions, including job sheets, plans, drawing and designs • Workplace procedures relating to reporting and communication • Manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • are to include carpet knee kicker, power stretcher, carpet stair tool, hand trucks, carpet trolleys, hammer, utility knife, hook knife, carpet wall trimmer, heat seam iron, spiked carpet roller, weight or seam roller, awl, carpet spreader, carpet shears, napping shears, loop pile cutter, cushion back cutter, moulding lifter and sewing needle
Materials	<ul style="list-style-type: none"> • may include but are not limited to architectural carpet gripper strips, metal mouldings and PVC trims, heat seam tape, hessian tape, thread and adhesives

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Carpet
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Co-requisite units

Co-requisite units	

LMFFL3206A Install synthetic textile floor coverings to sports facilities

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to install synthetic textile floor coverings to sporting facilities and outdoor venues including the preparation, cutting, layout, joining, fixing and finishing.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the installation of <i>synthetic textile floor coverings</i> are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.4. Sub-floor condition is assessed for suitability for installation</p> <p>1.5. Suitable <i>adhesives</i>, trims and accessories are selected if required</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials	<p>2.1. Synthetic textile floor covering material to be installed is checked against the order</p> <p>2.2. Synthetic textile floor covering flooring are acclimatised according to manufacturer recommendations</p> <p>2.3. Soft <i>underlays</i> for synthetic textile floor coverings are cut and laid to specification</p> <p>2.4. Working lines and starting point are established</p> <p>2.5. Adhesives and edge strips are prepared for use as required</p>
3. Lay floor covering	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Materials for fixing are organised and used in accordance with relevant safety management requirements</p> <p>3.3. Synthetic textile floor coverings are laid out to meet pattern and specification requirements and minimise waste and joins</p> <p>3.4. Synthetic textile floor coverings are accurately and clearly marked for cutting</p> <p>3.5. Synthetic textile floor coverings are cut to length, joins are cut and prepared for final laying</p> <p>3.6. Line marking is completed where required</p> <p>3.7. Cover trims are fitted and finished</p>

ELEMENT	PERFORMANCE CRITERIA
	3.8. Completed installation is checked for flaws in installation and materials and faults rectified
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriate 4.4. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Collect, organise and understand information related to work orders, basic plans and safety procedures
- Communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- Use pre-checking and inspection techniques to anticipate problems installing synthetic textile floor coverings to sport facilities to avoid rework and wastage
- Recognise and respond to circumstances outside instructions or personal competence
- Plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- Clarify and confirm work instructions
- Plan work within given task parameters
- Accept responsibility for given tasks
- Set, monitor and satisfy personal work goals
- Satisfy the competency requirements for the job
- Maintain current knowledge of:
 - tools and materials
 - installation techniques
- Seek learning opportunities
- Use the limited workplace technology related to the installation of synthetic textile floor coverings to sports facilities including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing synthetic floor coverings for sports facilities
- Organisational and site standards, requirements, policies and procedures for installing synthetic floor coverings for sports facilities
- Environmental protection requirements
- Established communication channels and protocols
- Problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- Types of tools and equipment and procedures for their safe use, operation and maintenance
- Characteristics of materials, products and defects
- Set up and operation of equipment
- Products assembly techniques
- Procedures for the recording, reporting and maintenance of workplace records and information
- Appropriate mathematical procedures for estimation and measurement
- Type, characteristics, uses and limitations of:
 - synthetic textile floor coverings used in sporting facilities
 - installation adhesives
 - underlay cushions
- Types and uses of installation tools and equipment
- Workplace safety system requirements related to installing synthetic textile floor coverings used in sporting facilities
- Characteristics and requirements of sub floor preparation
- Work flow in relation to flooring installation operations

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing synthetic textile floor coverings to sports facilities
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of two types of synthetic textile floor covering to a sports floor installation
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to installing synthetic textile floor coverings to sports facilities
 - specifications and work instructions

EVIDENCE GUIDE**Method of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Synthetic textile floor coverings	<ul style="list-style-type: none"> may include synthetic grass, needle punch carpet, PVC backed carpet, Rubber backed carpet
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • are to include straightedge tape measure, chalkline, hammer, utility knife, notched trowel, wall trimmer, cushion back cutter, loop pile cutter, laser measuring device and bar scribe
Materials	<ul style="list-style-type: none"> • may include but are not limited to finishing trims, angles and joining tapes
Adhesives	<ul style="list-style-type: none"> • are to include plasticized and rubber resin acrylic, water and solvent based adhesives and solvent based contact adhesive
Underlays	<ul style="list-style-type: none"> • may include rubber, bonded foam, SBR latex foam

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Carpet
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Co-requisite units

Co-requisite units	

LMFFL3207A Install carpet floor coverings to custom design stairs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competencies required to install plain and patterned carpet floor coverings to angular, curved, rounded and wrap-rounded stairs, including patterns, metal moulding and decorative finishes using adhesive bonded and carpet gripper systems, including planning, preparation, cutting, joining and fixing
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to installing <i>carpet floor coverings</i> to custom designed stairs are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. Floor condition is assessed for suitability for installation of unpatterned tufted and bonded carpet</p> <p>1.4. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.5. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials	<p>2.1. Carpet to be installed is checked against order</p> <p>2.2. Carpet floor coverings are acclimatised according to manufacturer recommendations</p> <p>2.3. <i>Stairway</i> or step is measured and the required amount of floor covering, and underlay including allowances for type of stairs, is calculated and obtained</p> <p>2.4. Suitable adhesives, gripper strips and edge strips are selected</p> <p>2.5. Work lines and starting point are established</p> <p>2.6. Gripper strips (if required) are cut and installed as specified in AS/NZS2455.1.1995</p> <p>2.7. Underlay (if required) is checked against specified type and fitted as specified in AS/NZS2455.1.1995</p>
3. Lay floor coverings	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Carpet floor coverings are laid out to meet allowances for type of stair requirements and minimise waste</p> <p>3.3. Carpet floor coverings are accurately and clearly marked for cutting</p> <p>3.4. Carpet floor coverings are cut to required shape with minimum waste of materials and laid</p> <p>3.5. Instructions, sequence, fixing methods and equipment are used following specifications and Australian Standards AS/NZS2455.1.1995</p>

ELEMENT	PERFORMANCE CRITERIA
	3.6. Installation is completed to specification 3.7. Finished stairway is checked for flaws in installation and materials and faults rectified
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriate 4.3. Work area is cleaned and rubbish disposed of appropriate 4.4. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing carpet floor coverings to custom designed stairs to avoid rework and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installation of carpet floor covering to custom designed stairs including tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing carpet floor coverings to custom designed stairs
- organisational and site standards, requirements, policies and procedures for installing carpet floor coverings to custom designed stairs
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- types and characteristics of stairways
- types and uses of carpet installation tools, equipment and materials
- types, uses and limitations of stairway carpet fixing techniques
- the characteristics of timber and concrete sub-floors
- workplace safety system requirements related to stairway carpet installation
- work flow in relation to the installation of carpets on stairways

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing carpet to custom designed stairs
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Complete a minimum of:
 - the installation of one tufted carpet and one patterned woven carpet to:
 - concrete or timber staircases
 - open newell
 - bullnose step
 - circular
 - recessed steps
 - open tread
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or

EVIDENCE GUIDE	
	<p>Australian Standards requirements</p> <ul style="list-style-type: none"> • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to installing carpet floor coverings to customer designed stairs • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Carpet floor coverings	<ul style="list-style-type: none"> may include tufted carpet, woven carpet, needle punch carpet and fusion bonded carpet
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment Workplace instructions, including job sheets,

RANGE STATEMENT	
	<p>plans, drawings and designs</p> <ul style="list-style-type: none"> • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • are to include knee kicker, stair tool, carpet gripper cutters, trimmer, hammer, staple hammer, compressor, air staple gun, utility knife, straight edge, drill, hacksaws and sewing needles
Materials	<ul style="list-style-type: none"> • may include but are not limited to underlay, tapes and adhesives, trims, nosing, smooth edges and accessories
Stairway	<ul style="list-style-type: none"> • may include open newell, bullnose steps, circular, recessed steps, open tread, box steps and kit winder treads

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Carpet
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Co-requisite units

Co-requisite units	

LMFFL3301A Install linoleum floor coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competencies to install linoleum floor coverings to domestic and commercial installations using templating and scribing methods
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to installing <i>linoleum floor coverings</i> are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Sub-floor condition is assessed for suitability for installation of linoleum floor coverings</p> <p>1.4. Suitable <i>adhesives</i>, trims and accessories are selected</p> <p>1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set-out materials	<p>2.1. Linoleum to be installed is checked against order</p> <p>2.2. Linoleum floor coverings are acclimatised according to manufacturer recommendations</p> <p>2.3. Linoleum floor coverings for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.4. Working lines and starting point are established</p> <p>2.5. Soft underlay (if required) is cut to specification</p> <p>2.6. Pre-form fillet is set out, cut and fitted (if required)</p>
3. Cut materials	<p>3.1. Linoleum floor coverings are laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate</p> <p>3.2. Linoleum floor coverings are accurately and clearly marked for cutting</p> <p>3.3. Linoleum floor coverings are cut to required pattern and shape with minimum waste of materials</p>
4. Lay linoleum	<p>4.1. Instructions and sequence for laying and fixing are followed</p> <p>4.2. Materials for <i>welding</i> and fixing are organised and used in accordance with relevant safety management requirements</p> <p>4.3. Welding and fixing methods and equipment are used following manufacturer instructions</p> <p>4.4. Resilient skirting, reducer and edge strips are set-out</p>

ELEMENT	PERFORMANCE CRITERIA
	and installed (as required) 4.5. Completed installation is checked for flaws in installation and materials and faults rectified
5. Complete housekeeping	5.1. Unused materials are stored or recycled as required 5.2. Tools and equipment are cleaned and stored appropriately 5.3. Work area is cleaned and rubbish disposed of appropriately 5.4. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing linoleum floor coverings to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to installing linoleum floor coverings including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to install linoleum floor coverings
- organisational and site standards, requirements, policies and procedures for installing linoleum floor coverings
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

- maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of:
 - weldable vinyl floor coverings
 - resilient floor covering installation adhesives
- types and uses of linoleum floor covering installation tools and equipment
- workplace safety system requirements related to resilient floor covering laying
- characteristics and requirements of sub-floor preparation
- work flow in relation to cutting, welding and laying linoleum floor coverings

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing linoleum floor coverings
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Cut, lay and heat weld, linoleum sheet floor coverings using fillet cove internal and external mitres to custom design and pattern scribe covering
- Cut, lay and heat weld, linoleum sheet floor coverings using pre-formed linoleum coving with internal and external mitres to a corridor and connecting room(s)
- Cut, lay and butt join linoleum sheet floor coverings to single/connecting room
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to installing linoleum floor coverings • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Linoleum floor coverings

- include:
 - linoleum sheet
 - bulletin board
 - linoleum tiles

RANGE STATEMENT	
	<ul style="list-style-type: none"> • preformed linoleum cove
Adhesives	<ul style="list-style-type: none"> • may include plasticised and rubber resin acrylic, two part epoxy, poly-methane and water based and solvent based contact adhesive
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • are to include utility knife with hook, straight and concave blades, straight edge square, square, chalk and chalk line, tape measure, hacksaw, notched trowel, hammer, seam and edge trimmer, recess scribe and preformed linoleum recess scribes, scribing bar, welding gun and accessories, hot air gun, grooving tool, divider, pencil cove roller, hand roller, cove gauging tool, roller, gas bottle and gun, rubber mallet, paint brush and bucket, spatula knife, builders pencil, contact bucket, linoleum trolley and wall trimmer
Materials	<ul style="list-style-type: none"> • are to include but are not limited to resilient sheet flooring, skirting, reducing and edge strips, welding rod, coving accessories, tapes, pattern paper and adhesives
Welding	<ul style="list-style-type: none"> • is to include hot welding

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Resilient
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Co-requisite units

Co-requisite units		

LMFFL3302A Install commercial vinyl floor coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competencies to install vinyl floor coverings to commercial premises including, lay out, cut, weld, cove and fix commercial vinyl floor coverings
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to installing <i>commercial vinyl floor coverings</i> are verified and complied with 1.2. <i>Instructions</i> and/or plans are read and interpreted to identify process required to complete work tasks 1.3. Sub-floor condition is assessed for suitability for installation of commercial vinyl floor coverings 1.4. Suitable <i>adhesives</i> , trims and accessories are selected 1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation
2. Set-out materials	2.1. Vinyl to be installed is checked against order 2.2. Commercial vinyl floor coverings are acclimatised according to manufacturer recommendations 2.3. Commercial vinyl floor coverings for fixing are organised and used in accordance with relevant safety management requirements 2.4. Working lines and starting point are established 2.5. Soft underlay (if required) is cut to specification 2.6. Pre-form fillet is cut and fitted (if required)
3. Lay floor coverings	3.1. Instructions and sequence for laying and fixing are followed 3.2. Commercial vinyl floor coverings are laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate 3.3. Commercial vinyl floor coverings are accurately and clearly marked for cutting 3.4. Commercial vinyl floor coverings are cut to required pattern and shape with minimum waste of materials 3.5. Materials for <i>welding</i> and fixing are organised and used in accordance with relevant safety management requirements 3.6. Welding and fixing methods and equipment are used following manufacturer instructions 3.7. Vinyl skirting, reducer and edge strips are set-out

ELEMENT	PERFORMANCE CRITERIA
	and installed (as required) 3.8. Completed installation is checked for flaws in installation and materials and faults rectified
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing commercial vinyl floor coverings to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to installing commercial vinyl floor coverings including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to install commercial vinyl floor coverings
- organisational and site standards, requirements, policies and procedures for installing commercial vinyl floor coverings
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

maintenance

- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of:
 - weldable vinyl floor coverings
 - resilient floor covering installation adhesives
- types and uses of commercial vinyl floor covering installation tools and equipment
- workplace safety system requirements related to resilient floor covering laying
- characteristics and requirements of sub-floor preparation
- work flow in relation to cutting, welding and laying commercial vinyl floor coverings

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing commercial vinyl floor coverings
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Using commercial grade resilient weldable floor coverings, cut, heat, weld, lay and pencil and fillet cove with internal and external mitre:
 - one piece including pre-formed coving, and
 - custom design and pattern scribe coving
- Cut-lay and chemically weld vinyl floor coverings
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to installing

EVIDENCE GUIDE	
	<p>commercial vinyl floor coverings</p> <ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Commercial vinyl floor coverings	<ul style="list-style-type: none"> • include: <ul style="list-style-type: none"> • homogenous/heterogeneous • encapsulated glass fibre • inlaid

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • may include plasticised and rubber resin acrylic, two part epoxy, poly-methane and water based and solvent based contact adhesive
Tools and equipment	<ul style="list-style-type: none"> • are to include utility knife with hook, straight and concave blades, straight edge square, roofing square, chalk and chalk-line, tape measure, hacksaw, notched trowel, hammer, seam and edge trimmer, recess scribe and pre-formed linoleum recess scribes, scribing bar, welding gun and accessories, hot air gun, grooving tool, dividers, pencil cover roller, hand roller, cover gauging tool, roller, gas bottle and gun, rubber mallet, paint brush and bucket, spatula knife, builders pencil, contact bucket, linoleum trolley, liquid seam sealer, seam sealer applicator and wall trimmer
Materials	<ul style="list-style-type: none"> • are to include but are not limited to vinyl floor coverings, skirting, reducing and edge strips, welding rod, coving accessories, tapes, pattern paper and adhesives
Welding	<ul style="list-style-type: none"> • is to include hot welding and chemical welding

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Resilient
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Co-requisite units

Co-requisite units		

LMFFL3303A Install resilient floor coverings using custom designs and decorative finishes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to install resilient sheet floor coverings using custom design, mechanically and hand cut motifs, logos and decorative finishes.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to installing resilient floor coverings are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Sub-floor condition is assessed for suitability for installation of custom design resilient floor coverings</p> <p>1.4. Suitable adhesives, trims and accessories are selected</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials	<p>2.1. Resilient floor coverings to be installed are checked against order</p> <p>2.2. Resilient custom design floor coverings are acclimatised according to manufacturers' recommendations</p> <p>2.3. Resilient custom design floor coverings for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.4. Working lines and starting point are established and marked on the sub-floor</p> <p>2.5. Motifs, logos or custom designs are set out and marked on the sub-floor</p>
3. Lay floor covering	<p>3.1. Instructions and sequence for laying and fixing is followed</p> <p>3.2. Resilient custom design floor coverings are laid out to meet directional sequence, pattern match, and specification requirements and to minimise waste and joins as appropriate</p> <p>3.3. Resilient custom design flooring materials are accurately and clearly marked for cutting</p> <p>3.4. Resilient custom design floor coverings are cut to required shape ensuring minimum waste</p> <p>3.5. Materials for fixing are organised and used in accordance with relevant safety management requirements</p>

ELEMENT	PERFORMANCE CRITERIA
	3.6. Adhesives and edge strips/accessories are prepared for use as required 3.7. Welding and fixing methods and equipment are used following manufacturer instructions 3.8. Finished job is inspected and any imperfections are rectified following workplace procedures
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing resilient floor coverings to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to installing resilient floor coverings including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing resilient floor covering using custom designs and decorative finishes
- organisational and site standards, requirements, policies and procedures for installing resilient floor coverings using custom designs and decorative finishes
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of:
 - weldable resilient floor coverings
 - resilient floor covering installation adhesives
- types and uses of resilient floor covering installation tools and equipment
- workplace safety system requirements related to resilient floor covering laying
- characteristics and requirements of sub-floor preparation
- work flow in relation to cutting, welding and laying resilient sheet flooring.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing resilient floor coverings
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Cut and lay resilient floor coverings using custom designs and decorative finishes with internal and external mitres:
 - one piece and performed coving; and
 - custom designed and pattern scribed coving using commercial grade resilient floor coverings
- Cut and lay resilient floor coverings using custom design containing logo/motifs using commercial grade resilient floor coverings including decorative welding, inlays and borders

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to installing

EVIDENCE GUIDE	
	<p>resilient floor coverings using custom designs and decorative finishes</p> <ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Legislative requirements</p>	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
<p>OHS requirements</p>	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
<p>Organisational requirements</p>	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
<p>Resilient flooring coverings</p>	<ul style="list-style-type: none"> • may include: <ul style="list-style-type: none"> • homogenous/heterogeneous • linoleum sheet • encapsulated glass fibre

RANGE STATEMENT	
	<ul style="list-style-type: none"> • in laid • rotogravure
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications
Adhesives	<ul style="list-style-type: none"> • may include plasticised and rubber resin acrylic, two part epoxy, poly-methane and water based and solvent based contact adhesive
Tools and equipment	<ul style="list-style-type: none"> • are to include utility knife and hook, straight and concave blades, straight edge square, square, chalk and chalk-line, tape measure, hacksaw, serrated trowel, hammer, seam and edge trimmer, recess scribe and pre-formed linoleum recess scribes, scribing bar, welding gun and accessories, hot air gun, grooving tool, divider, pencil cove roller, hand roller, cover gauging tool, roller, gas bottle and gun, rubber mallet, paint brush and bucket, spatula knife, builders pencil, contact bucket, linoleum trolley, liquid seam sealer, seam sealer applicator and wall trimmer
Materials	<ul style="list-style-type: none"> • are to include but are not limited to resilient sheet flooring, skirting, reducing and edge strips, welding rod, coving accessories, tapes, pattern paper and adhesives
Welding	<ul style="list-style-type: none"> • is to include hot welding and chemical welding

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Resilient
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Co-requisite units

Co-requisite units		

LMFFL3304A Install resilient tiles using custom design and decorative finishes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to install resilient tiles to multiple connecting rooms and/or large commercial sites using multi directional patterns, custom design, mechanically and hand cut motifs, logos and decorative finishes including the preparation, layout, cutting, laying and fixing of resilient tiles.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the installation of <i>resilient tiles</i> using custom design and decorative finishes are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Sub-floor condition is assessed for installation of resilient tiles</p> <p>1.4. Suitable adhesives, trims and accessories are selected</p> <p>1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials	<p>2.1. Resilient tiles to be installed are checked against order</p> <p>2.2. Resilient tiles are acclimatised according to manufacturer recommendations</p> <p>2.3. Materials for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.4. Set out patterns, motifs, logos and custom design requirements</p> <p>2.5. Working lines and starting point are established</p>
3. Lay floor covering	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Materials are laid out to meet specification requirements and to minimise waste</p> <p>3.3. Material grains and patterns are matched or contrasted as appropriate</p> <p>3.4. Tiles are accurately and clearly marked for cutting</p> <p>3.5. Tiles are cut to required shape with minimum waste of materials and laid</p> <p>3.6. Complete installation is checked for flaws in installation and materials and faults are rectified</p>
4. Complete housekeeping	<p>4.1. Unused materials are stored or recycled as required</p> <p>4.2. Tools and equipment are cleaned and stored</p>

ELEMENT	PERFORMANCE CRITERIA
	appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing resilient tiles using custom design requirements to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installing of resilient tiles using custom design requirements, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing resilient tiles using custom design requirements
- organisational and site standards, requirements, policies and procedures for installing resilient tiles using custom design requirements
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- types, characteristics, uses and limitations of:
 - resilient tiles
 - resilient tile installation adhesives
- types and uses of resilient tile installation tools and equipment
- workplace safety system requirements related to resilient tile installation
- characteristics and requirements of sub-floor preparation
- work flow in relation to cutting and laying resilient tiles

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the installation of resilient tiles meeting custom design requirements
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to materials and equipment
 - maintain required production output and product quality
- Install resilient tiles where cutting and fixing is required on either a timber sub-floor, or a concrete sub-floor, in multiple rooms with complex design requirements
- Complete a minimum of:
 - one resilient installation to multiple connecting rooms using multi-directional patterns/borders, including appropriate trims and accessories
 - one resilient plank installation that includes a motif/logo and including appropriate trim and accessories
 - one resilient tile installation to large commercial site that includes a 'link-up' and custom design requirement, including appropriate trims and accessories
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and

EVIDENCE GUIDE	
	<p>environmental constraints</p> <ul style="list-style-type: none"> • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to installing resilient tiles • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Resilient tiles	<ul style="list-style-type: none"> include homogenous/heterogeneous, linoleum, rubber, semi-rigid, rigid and planks
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment Workplace instructions, including job sheets,

RANGE STATEMENT	
	<p>plans, drawings and designs</p> <ul style="list-style-type: none"> • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • are to include pressure sensitive adhesives, two part epoxy, poly-urethane and water and solvent based contact adhesive
Tools and equipment	<ul style="list-style-type: none"> • are to include utility knife, tile scribe, straight edge, square, chalk and chalk-line, tape measure, hacksaw, serrated trowel, hammer, scribing bar, dividers, roller, gas bottle and gun, rubber mallet, paint brush and bucket, spatula knife and trolleys
Materials	<ul style="list-style-type: none"> • are to include but not be limited to resilient tile flooring, skirting, reducing and edge strips, tapes, pattern paper and adhesives

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Resilient
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Co-requisite units

Co-requisite units	

LMFFL3305A Install rubber floor coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to install rubber sheet and tile floor coverings including preparation, cutting, laying and fixing.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to installing <i>rubber floor coverings</i> are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. Sub-floor condition is assessed for suitability for installation of rubber floor coverings</p> <p>1.4. Suitable <i>adhesives</i>, trims and accessories are selected if required</p> <p>1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials	<p>2.1. Rubber floor covering to be installed is checked against order</p> <p>2.2. Rubber floor coverings are acclimatised according to manufacturers' recommendations</p> <p>2.3. Rubber floor coverings for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.4. Instructions and sequence for laying and fixing are followed</p> <p>2.5. Working lines and starting point are established</p>
3. Lay floor coverings	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Rubber floor coverings are laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate</p> <p>3.3. Rubber flooring materials are accurately and clearly marked for cutting</p> <p>3.4. Rubber floor covering materials are cut to required shape ensuring minimum waste</p> <p>3.5. Rubber floor covering materials for fixing are organised and used in accordance with relevant safety management requirements</p> <p>3.6. Adhesives and edge strips/accessories are prepared for use as required</p>

ELEMENT	PERFORMANCE CRITERIA
	3.7. Fixing methods and equipment are used following manufacturer recommendations 3.8. Finished job is inspected and any imperfections are rectified following workplace procedures
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing rubber floor coverings to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installing rubber floor coverings including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing rubber floor coverings
- organisational and site standards, requirements, policies and procedures for installing rubber floor coverings
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

- maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of:
 - rubber floor covering
 - installation adhesives
- types and uses of installation tools and equipment
- workplace safety system requirements related to rubber floor coverings
- characteristics and requirements of sub-floor preparation
- work flow in relation to the installation of rubber floor coverings

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing rubber floor covering
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to materials and equipment
 - maintain required production output and product quality
- Complete a minimum of two different types of installation, which are to include:
 - one epoxy rubber tile installation to connecting rooms
 - one polyurethane rubber sheet installation to connection rooms
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to installing

EVIDENCE GUIDE	
	<p>rubber floor coverings</p> <ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling, including lifting and carrying.
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Rubber floor coverings	<ul style="list-style-type: none"> include smooth and studded rubber in both sheet and tile and are normally vulcanised
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment Workplace instructions, including job sheets,

RANGE STATEMENT	
	<p>plans, drawings and designs</p> <ul style="list-style-type: none"> • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • are to include two part epoxy, polyurethane, acrylic and contact
Tools and equipment	<ul style="list-style-type: none"> • are to include utility knife, straight edge, square, chalk and chalk-line, tape measure, hacksaw, notched trowel, hammer, recess scribe, scribing bar, dividers, hand roller, roller, mixing equipment (epoxy), paint brush and bucket, spatula knife, builders pencils, contact bucket, brushes, rollers, linoleum trolley and dolly rollers
Materials	<ul style="list-style-type: none"> • may include but are not limited to rubber floor covering (tile or sheet), trims and accessories and adhesives

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Resilient
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Co-requisite units

Co-requisite units	

LMFFL3306A Install resilient sheet to walls

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to install resilient sheet to dry and wet walls.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to installing <i>resilient wall coverings</i> are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Sub-strate condition is assessed for suitability for installation of resilient coverings to the walls</p> <p>1.4. Suitable <i>adhesives</i>, trims and accessories are selected</p> <p>1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set-out floor coverings	<p>2.1. Resilient wall covering to be installed is checked against order</p> <p>2.2. Resilient wall coverings are acclimatised according to manufacturer recommendations</p> <p>2.3. Resilient wall coverings for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.4. Working lines and starting point are established</p> <p>2.5. Pre-form fillet is cut and fitted (if required)</p> <p>2.6. <i>Feathering systems</i> and applications are prepared and applied in accordance with the installation plan</p>
3. Install resilient sheet	<p>3.1. Resilient wall coverings are laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate</p> <p>3.2. The aesthetics of the materials is maximised where appropriate, matching grains, colours and patterns</p> <p>3.3. Materials are cut to length and size, allowing for final adjustment, trimming and <i>welding</i> processes</p> <p>3.4. Header and/or perimeter contact adhesive is applied to surfaces</p> <p>3.5. Adhesive is applied to the body of the walls as specified by the adhesive manufacturer</p> <p>3.6. Resilient wall covering is positioned in accordance with the plan, pressed out and hand-rolled</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.7. Resilient wall covering is heated to form required <i>profiles</i></p> <p>3.8. Seams are prepared and welded in accordance with the plan, manufacturer instructions and industry standards</p> <p>3.9. Joins and/or seams are <i>trimmed and finished</i> to industry standards</p> <p>3.10. Resilient wall coverings are <i>sealed</i> to floor coverings, door and window frames, as well as fixtures and fittings in wet area installations</p> <p>3.11. Completed installation is checked for flaws in installation and materials and faults rectified following workplace procedures</p>
4. Complete housekeeping	<p>4.1. Unused materials are stored or recycled as required</p> <p>4.2. Tools and equipment are cleaned and stored appropriately</p> <p>4.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>4.4. Workplace documentation and/or reports are completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing resilient wall coverings to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to installing resilient wall coverings including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing resilient sheet to walls
- organisational and site standards, requirements, policies and procedures for installing resilient sheet to walls
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

maintenance

- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of:
 - weldable resilient wall coverings
 - resilient wall covering installation adhesives
- types and uses of resilient wall covering installation tools and equipment
- workplace safety system requirements related to resilient wall covering installation
- characteristics and requirements of sub-strate preparation for wall coverings
- work flow in relation to fixing, welding and finishing of resilient wall coverings

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing resilient wall coverings
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Complete a minimum of:
 - one installation of a wet wall resilient wall covering installation using a horizontal installation system including internal and external corners to walls, the covering of window reveals and sealing to door frames and fittings
 - one installation of a wet wall resilient wall covering installation using a vertical installation system including internal and external corners to walls, the covering of window reveals and sealing to door frames and fittings
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or

EVIDENCE GUIDE	
	<p>Australian Standards requirements</p> <ul style="list-style-type: none"> • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to installing resilient sheet to walls • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Resilient wall coverings

- may be:
 - homogeneous/heterogeneous
 - linoleum sheet
 - encapsulated glass fibre

RANGE STATEMENT	
	<ul style="list-style-type: none"> • inlaid • rotogravure
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • are to include, but may not be limited to acrylic adhesives and water and solvent based contacts recommended by manufacturers
Tools and equipment	<ul style="list-style-type: none"> • may include flat trowel, notched trowel, pencil cove roller, wall roller, hand roller, cove and corner roller, recess scribe, hook and straight knife, chalk line, spirit level, tape measure, water level, laser level, height gauge, wall trolley, contact bucket/tray/roller brushes, scaffolding and step ladder
Materials	<ul style="list-style-type: none"> • are to include but are not limited to resilient wall coverings, skirting, reducing and edge strips, welding rod, coving accessories, tapes, pattern paper, fillers and adhesives
Feathering systems	<ul style="list-style-type: none"> • are to include the fitment of PVC edge fillet diminishing strip and the use of pre-mixed or mixed cementitious compounds
Welding	<ul style="list-style-type: none"> • is to include rod welding, self welding and fusion
Profiles	<ul style="list-style-type: none"> • are to include internal and external angles, bullnoses, coves and may include profiling to pipe work
Trimmed and finished	<ul style="list-style-type: none"> • is to include trimming weld rod, abrading and fusing external corners and chemically finishing to industry standards and manufacturer specifications
Sealed	<ul style="list-style-type: none"> • is to include the sealing of the resilient wall coverings at door and window frames, pipes, fixtures, fittings and floor coverings

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Resilient
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Co-requisite units

Co-requisite units		

LMFFL3307A Install resilient sheet to bench and counter tops

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to install resilient sheet to bench and counter tops.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare materials for installation	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to installing resilient coverings to bench and counter tops are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Sub-strate condition is assessed for suitability for installation of resilient coverings to the bench/counter top</p> <p>1.4. Suitable adhesives, trims and accessories are selected</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p> <p>1.7. The aesthetics of the materials is maximised where appropriate, matching grains, colours and patterns</p>
2. Set out materials	<p>2.1. Resilient coverings to be installed are checked against order</p> <p>2.2. Resilient coverings are acclimatised according to manufacturer recommendations</p> <p>2.3. Resilient coverings for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.4. Working lines and starting point are established</p> <p>2.5. Pre-form fillet is cut and fitted (if required)</p> <p>2.6. Feathering systems and applications are prepared and applied in accordance with the installation plan</p>
3. Install resilient sheet	<p>3.1. Instructions and sequence for laying and fixing is followed</p> <p>3.2. Resilient coverings are laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate</p> <p>3.3. The aesthetics of the materials is maximised where appropriate, matching grains, colours and patterns</p> <p>3.4. Pattern templates of the bench/counter tops are produced (if required)</p> <p>3.5. Resilient coverings are accurately and clearly</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>marked for cutting</p> <p>3.6. Resilient coverings are cut to required pattern and shape with minimum waste of materials, allowing for final adjustment, trimming and <i>welding</i> processes</p> <p>3.7. Header and/or perimeter contact adhesive is applied to surfaces</p> <p>3.8. Resilient covering is positioned in accordance with the plan, pressed out and hand-rolled</p> <p>3.9. Sheet is heated to form required <i>profiles</i></p> <p>3.10. Seams are prepared and welded in accordance with the plan, manufacturer instructions and industry standards</p> <p>3.11. Joins and/or seams are <i>trimmed and finished</i> to industry standards</p> <p>3.12. Completed installation is checked for flaws in installation and materials and faults rectified following workplace procedures</p>
4. Complete housekeeping	<p>4.1. Unused materials are stored or recycled as required</p> <p>4.2. Tools and equipment are cleaned and stored appropriate</p> <p>4.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>4.4. Workplace documentation and/or reports are completed</p>

Required Skills and Knowledge

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing resilient sheet to bench and counter
- organisational and site standards, requirements, policies and procedures for installing resilient sheet to bench and counter
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of
 - weldable resilient coverings used on bench and counter tops
 - resilient coverings installation adhesives
- types and uses of resilient bench and countertop installation tools and equipment
- workplace safety system requirements related to bench and counter top resilient covering installation
- characteristics and requirements of sub-strate preparation to bench and counter tops
- work flow in relation to fixing, welding and finishing of resilient coverings to bench and countertops

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing resilient coverings to bench and counter tops
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Complete a minimum of:
 - one installation of resilient coverings to a bench/counter top which must include:
 - internal and external corners
 - a bull-nose and coved returns
 - and including rod and self welding and fusion welding requirements
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • materials and equipment relevant to installing resilient sheet to bench and counter tops • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Resilient coverings

- may be:
 - homogeneous/heterogeneous
 - linoleum sheet
 - encapsulated glass fibre

RANGE STATEMENT	
	<ul style="list-style-type: none"> • inlaid • rotogravure
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • are to include, but may not be limited to acrylic adhesives and water and solvent based contacts recommended by manufacturers
Tools and equipment	<ul style="list-style-type: none"> • are to include flat trowel, notched trowel, pencil cove roller, wall roller, hand roller, cove and corner roller, recess scribe, reverse recess scribes, hook and straight knife, chalk line, spirit level, tape measure, water level, laser level, height gauge, contact bucket/tray/roller and brushes
Materials	<ul style="list-style-type: none"> • are to include but are not limited to resilient sheet, skirting, reducing and edge strips, welding rod, coving accessories, tapes, pattern paper, fillers and adhesives
Feathering systems	<ul style="list-style-type: none"> • are to include the fitment of PVC edge fillet diminishing strip and the use of pre-mixed or mixed cementitious compounds
Welding	<ul style="list-style-type: none"> • is to include rod welding, self welding and fusion
Profiles	<ul style="list-style-type: none"> • are to include internal and external angles, bullnoses, coves and may include profiling to pipe work
Trimmed and finished	<ul style="list-style-type: none"> • is to include trimming weld rod, abrading and fusing external corners and chemically finishing to industry standards and manufacturer specifications

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Resilient
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Co-requisite units

Co-requisite units		

LMFFL3308A Install anti-static resilient floor coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to install anti-static resilient floor coverings including preparation, cutting, laying and fixing.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to install <i>anti-static resilient floor coverings</i> are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. Sub-floor condition is assessed for suitability for installation of anti-static sheet vinyl floor covering</p> <p>1.4. Suitable <i>adhesives</i>, trims and accessories are selected if required</p> <p>1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials	<p>2.1. Anti-static resilient floor covering to be installed is checked against order</p> <p>2.2. Vinyl floor coverings used in 'anti-static' installations are acclimatised according to manufacturer recommendations</p> <p>2.3. Vinyl floor coverings used in 'anti-static' installations are organised and used in accordance with relevant safety management requirements</p> <p>2.4. Working lines and starting point are established</p>
3. Lay floor covering	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Anti-static resilient floor coverings are laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate</p> <p>3.3. Anti-static resilient flooring materials are accurately and clearly marked for cutting</p> <p>3.4. Anti-static resilient flooring materials are cut to required shape ensuring minimum waste</p> <p>3.5. Adhesives and edge strips/accessories are prepared for use as required</p> <p>3.6. Anti-static resilient floor coverings for fixing are organised and used in accordance with relevant safety management requirements</p> <p>3.7. Anti-static resilient floor covering is laid and fixed</p>

ELEMENT	PERFORMANCE CRITERIA
	to meet job specifications 3.8. Anti-static resilient floor covering fixing methods and equipment are used following manufacturer recommendations 3.9. Completed installation is checked for flaws in installation and materials and faults rectified following workplace procedures
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing anti-static resilient floor coverings to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installation of anti-static resilient floor coverings including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to install anti-static resilient floor coverings
- organisational and site standards, requirements, policies and procedures for installing anti-static resilient floor coverings
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of:
 - anti-static resilient floor coverings
 - installation adhesives
- types and uses of installation tools and equipment
- workplace safety system requirements related to anti-static resilient floor coverings
- characteristics and requirements of sub floor preparation
- work flow in relation to the installation of anti-static resilient floor coverings

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the installation of anti-static resilient floor coverings
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to materials and equipment
 - maintain required production output and product quality
- Complete at least one anti-static resilient floor installation using a conductive acrylic adhesive system
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to installing anti-static resilient floor coverings
 - specifications and work instructions

EVIDENCE GUIDE**Method of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Anti-static resilient flooring coverings	<ul style="list-style-type: none"> include resilient flooring with a resistance rating from 108 to 1010 ohms
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • are to include acrylic and conductive acrylic adhesives
Tools and equipment	<ul style="list-style-type: none"> • may include utility knife, straight edge, square, chalk and chalk-line, tape measure, hacksaw, serrated trowel, hammer, seam and edge trimmer, recess scribe, scribing bar, welding gun and accessories, grooving tool, straight edge, divider, hand roller, roller, gas bottle and gun, rubber mallet, paint brush and bucket, spatula knife, dividers, builders pencil, contact bucket, brush and roller and linoleum trolley
Materials	<ul style="list-style-type: none"> • may include but are not limited to anti-static resilient flooring materials, trims and accessories, tapes and adhesives

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Resilient
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFFL3309A Install conductive resilient floor coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to install conductive resilient floor coverings including preparation, cutting, laying and fixing.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to installing <i>conductive resilient floor coverings</i> are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. Sub-floor condition is assessed for suitability for installation of conductive resilient floor coverings</p> <p>1.4. Suitable <i>adhesives</i>, trims and accessories are selected</p> <p>1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use, to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p> <p>1.7. Materials are laid out to meet pattern and specification requirements and minimise waste and joins</p>
2. Set out materials	<p>2.1. Resilient floor coverings to be installed are checked against order</p> <p>2.2. Conductive resilient floor coverings are acclimatised according to manufacturers' recommendations</p> <p>2.3. Conductive resilient floor coverings for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.4. Working lines and starting point are established</p>
3. Lay floor coverings	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Copper grid and isolating layer are installed to specification</p> <p>3.3. Conductive resilient floor coverings are laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate</p> <p>3.4. Conductive resilient floor coverings are accurately and clearly marked for cutting</p> <p>3.5. Conductive resilient floor coverings are cut to required pattern and shape with minimum waste of materials</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.6. Conductive resilient floor coverings for welding and fixing are organised and used in accordance with relevant safety management requirements</p> <p>3.7. Welding and fixing methods and equipment are used following manufacturer instructions</p> <p>3.8. Conductive resilient floor covering is laid and fixed to meet job specifications</p> <p>3.9. Vinyl skirting, reducer and edge strips are set-out and installed (as required)</p> <p>3.10. Completed installation is checked for flaws in installation and materials and faults rectified following workplace procedures</p>
4. Complete housekeeping	<p>4.1. Unused materials are stored or recycled as required</p> <p>4.2. Tools and equipment are cleaned and stored appropriately</p> <p>4.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>4.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing conductive resilient floor coverings to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installing of conductive resilient floor coverings including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing conductive resilient floor coverings
- organisational and site standards, requirements, policies and procedures for installing conductive resilient floor coverings
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of:
 - conductive resilient floor covering
 - conductive adhesives
- types and uses of installation tools and equipment
- workplace safety system requirements related to conductive resilient floor coverings
- characteristics and requirements of sub floor preparation
- work flow in relation to the installation of conductive resilient floor coverings

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing conductive resilient floor coverings
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to materials and equipment
 - maintain required production output and product quality
- Complete a minimum of one installation of a static conductive resilient floor covering with an isolating layer and using conductive adhesive and earthing strip
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to installing conductive resilient floor coverings

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Conductive resilient floor coverings	<ul style="list-style-type: none"> Conductive resilient floor coverings include static conductive covering with a resistance reading of 10 4 to 10 8 using a copper grid and isolating layer

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications
Adhesives	<ul style="list-style-type: none"> • are to include conductive adhesives
Tools and equipment	<ul style="list-style-type: none"> • are to include utility knife (with hook, straight and concave blades), straight edge, square, chalk and chalk-line, tape measure, hacksaw, serrated trowel, hammer, seam and edge trimmer, recess scribe, scribing bar, welding gun and accessories, grooving tool, divider, hand roller, exacto knife, roller (65 kg), gas bottle and gun, rubber mallet, paint brush and bucket, spatula knife, dividers, builders pencil, contact bucket, brush and roller • may include linoleum trolley
Materials	<ul style="list-style-type: none"> • are to include but are not limited to conductive resilient flooring, trims and accessories, adhesives and copper earthing strips

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Resilient
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFFL3310A Cut and install resilient floor coverings to stairs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competencies required to install resilient floor covering to stairs, stringers and steps including planning, preparation, cutting, welding, layout and fixing.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to cutting and installing resilient floor coverings to stairs are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Sub-floor condition is assessed for suitability for installation of resilient floor coverings to stairs</p> <p>1.4. Any remedial work to stairway is carried out</p> <p>1.5. Stairway or step is measured and the required amount of floor covering including allowances for type of stairs, is calculated and obtained</p> <p>1.6. Underlay (if required) is checked against specified type and fitting</p> <p>1.7. Suitable adhesives, trims and accessories are selected</p> <p>1.8. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.9. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set-out floor coverings	<p>2.1. Resilient floor coverings to be used are checked against order</p> <p>2.2. Resilient floor coverings are acclimatised according to manufacturer recommendations</p> <p>2.3. Resilient floor coverings for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.4. Working lines and starting point are established</p> <p>2.5. Pre-form fillet is cut and fitted (if required)</p>
3. Lay resilient floor coverings	<p>3.1. Instructions and sequence for laying and fixing is followed</p> <p>3.2. Resilient floor coverings are laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate</p> <p>3.3. Patterns are cut as required for stairs and used to accurately and clearly mark resilient floor covering for cutting</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.4. Resilient floor coverings are cut to required pattern and shape with minimum waste of materials</p> <p>3.5. Materials for welding and fixing are organised and used in accordance with relevant safety management requirements</p> <p>3.6. Welding and fixing methods, equipment and materials are used following manufacturers' instructions</p> <p>3.7. Resilient skirting, reducer and edge strips are set out and installed (as required)</p> <p>3.8. Completed installation is checked for flaws in installation and materials and faults rectified following workplace procedures</p>
4. Complete housekeeping	<p>4.1. Unused materials are stored or recycled as required</p> <p>4.2. Tools and equipment are cleaned and stored appropriately</p> <p>4.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>4.4. Workplace documentation and/or reports are completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems, cutting and installing resilient floor coverings to stairs to avoid rework and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the cutting and installing resilient floor coverings to stairs including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to cutting and installing resilient floor coverings to stairs
- organisational and site standards, requirements, policies and procedures for cutting and installing resilient coverings to stairs
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of:
 - weldable resilient floor coverings
 - resilient floor covering installation adhesives
- forming and welding techniques for installing resilient floor coverings to stairs
- types and uses of resilient floor covering installation tools and equipment
- workplace safety system requirements related to resilient floor covering installation
- characteristics and requirements of sub-floor preparation
- work flow in relation to cutting, welding and laying resilient flooring to stairs

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for cutting and installing resilient floor coverings to stairs
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of the installation of resilient floor coverings to:
 - a box step stairway, stringer and PVC stair nosing
 - a kite winder treads stairway, and PVC stair nosing
 - a bull nose step stairway PVC stair nosing
 - a recessed step stairway
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • materials and equipment relevant to installing resilient floor coverings to stairs • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Resilient floor covering	<ul style="list-style-type: none"> includes homogenous/heterogeneous, linoleum sheet, encapsulated glass fibre, inlaid and rotogravure
Stairs	<ul style="list-style-type: none"> may include open newell, bullnose steps, circular, recessed steps, open tread, box steps

RANGE STATEMENT	
	<ul style="list-style-type: none"> and kit winder treads • Work involves the cutting, welding, laying and fixing of resilient floor covering to stairs.
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • may include: <ul style="list-style-type: none"> • plasticised and rubber resin acrylic • two part epoxy • polyurethane • water-based and solvent-based contact adhesive
Tools and equipment	<ul style="list-style-type: none"> • may include: <ul style="list-style-type: none"> • utility knife with hook, straight and concave blades • straight edge • square • chalk and chalk-line • tape measure • hacksaw • notched trowel • hammer • seam and edge trimmer • recess scribe and pre-formed linoleum recess scribes • scribing bar • welding gun and accessories • hot air gun • grooving tool • divider • pencil cove roller • hand roller • cove gauging tool • roller

RANGE STATEMENT	
	<ul style="list-style-type: none"> • gas bottle and gun • rubber mallet • paint brush and bucket • spatula knife • builder's pencil • contact bucket • linoleum trolley • liquid seam sealer • seam sealer applicator • wall trimmer
Materials	<ul style="list-style-type: none"> • are to include but are not limited to: <ul style="list-style-type: none"> • resilient flooring • skirting • reducing and edge strips • welding rod • coving accessories • tapes • pattern paper • adhesives

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Resilient
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFFL3401A Mix and apply epoxy and seamless floor coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the preparation, application and finishing of epoxy and seamless floor coverings.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for the work	<p>1.1. Applicable OHS, legislative, organisational and information requirements relevant to the application of epoxy and seamless floor coverings are verified and complied with</p> <p>1.2. Work orders and/or plans are read and interpreted</p> <p>1.3. The condition of the sub-floor is inspected and confirmed as suitable for use</p> <p>1.4. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.5. Floor preparation, including conventional and decorative formwork is established, levelled and secured</p>
2. Apply epoxy materials floor covering	<p>2.1. Surfaces are checked for contamination, moisture content and suitable preparation</p> <p>2.2. Materials and equipment are prepared and positioned for use</p> <p>2.3. Material safety data sheets, or equivalent, are read and applied during the work</p> <p>2.4. Trial applications of surface materials are made to check equipment operation, materials consistency and specified surface finish</p> <p>2.5. Surface coatings are applied with the depth and coverage in accordance with manufacturer specifications and job requirements</p> <p>2.6. Decorative additives are applied in accordance with job requirements</p> <p>2.7. Floor is checked and cleared for further processing</p>
3. Finish the flooring	<p>3.1. Sanding/grinding equipment is set up in accordance with manufacturer instructions and operating procedures</p> <p>3.2. Emergency stops, gauges, guards and controls are identified and checked</p> <p>3.3. Equipment settings and adjustments are made and checked</p> <p>3.4. Trial runs are conducted to check machine operations and quality of finished work</p> <p>3.5. Sanding/grinding is completed to industry and manufacturer standards.</p>

ELEMENT	PERFORMANCE CRITERIA
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately 4.4. Workplace documentation and/or reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate epoxy and seamless application problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - epoxy and seamless application techniques
- seek learning opportunities
- use the limited workplace technology related to the epoxy and seamless application including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the application of epoxy and seamless floor coverings
- organisational and site standards, requirements, policies and procedures for moisture suppressant and barrier systems
- environmental protection requirements
- type, characteristics, uses and limitations of:
 - epoxy and seamless floor coverings
 - sanders/grinders

REQUIRED SKILLS AND KNOWLEDGE

- techniques for preparing epoxy and seamless materials, including decorative additives
- workplace safety system requirements related to sanding and grinding
- types and uses of relevant tools and equipment
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- characteristics and requirements of monolithic sub-floor preparation
- established communication channels and protocols
- problem identification and resolution

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for preparing and presenting design information
- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Work effectively with others
- Complete a minimum of three of the following:
 - a trowelled epoxy floor
 - a self levelling epoxy floor
 - a flake floor
 - a seamless floor
- Modify activities to cater for variations in workplace context and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the preparation for and application of epoxy and

EVIDENCE GUIDE	
	seamless flooring <ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Information and procedures

- Workplace procedures relating to use and operation of tools and equipment
- Work instructions, including job sheets, plans, drawings and designs
- Workplace procedures relating to reporting

RANGE STATEMENT	
	<p>and communications</p> <ul style="list-style-type: none"> • Manufacturer instructions for the use of equipment and materials
Epoxy and seamless flooring	<ul style="list-style-type: none"> • includes trowelled epoxy, self levelling epoxy, flake floors, granule floors, epoxy coatings (seamless), spray on roller coatings and waterproofing, and joint sealing
Sub-floor preparation	<ul style="list-style-type: none"> • is to include sanding, grinding and the application of levelling compounds and primers
General tools and equipment	<ul style="list-style-type: none"> • are to include utility knife, straight edge, square, tape measure, trowels, rollers, brushes, buckets and trolley
Sanding equipment	<ul style="list-style-type: none"> • is to include sander, edger, belt-sander, sander belts and paper
Materials	<ul style="list-style-type: none"> • are to include but are not limited to: acrylics, epoxy, polyurethane, separating strips, flushing strips, joining strips, expansion jointing, additives (flakes and granules), oil and lubricants for equipment
Grinding equipment	<ul style="list-style-type: none"> • is to include grinder, grinding stones and materials

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Coatings
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Co-requisite units

Co-requisite units		

LMFFL3402A Apply solvent based coatings to timber flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to select solvent coating systems appropriate for the job, to prepare for the work and to apply the selected coatings to timber and parquetry floors.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and prepare for work requirements	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the application of finishes are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Coating material is selected with regard to durability, longevity, aesthetics, manufacturer recommendations and client expectations</p> <p>1.4. Selected coating materials are assessed as being compatible with each other, with the surface to be finished and with manufacturer recommendations</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Surface to be finished is inspected and assessed as being ready for coating</p> <p>1.7. Work sequence is planned to ensure efficiency and quality of application</p> <p>1.8. Workplace health and safety requirements, including isolation, ventilation and other personal protection needs, are observed throughout the work</p>
2. Apply finishing system	<p>2.1. Ventilation is checked before chemical fumes are released, and all OHS requirements are met including use of personal protective equipment</p> <p>2.2. Environmental protection regulations are complied with</p> <p>2.3. Coating material is applied in accordance with manufacturer recommendations</p> <p>2.4. Recommended drying times between coats are observed</p> <p>2.5. Buffing or sanding between coats, where required, is carried out according to manufacturer recommendations</p> <p>2.6. Final finish meets the requirements of the job</p>
3. Complete housekeeping	<p>3.1. Unused materials are resealed and stored</p> <p>3.2. Tools and equipment are cleaned, maintained and stored</p> <p>3.3. Work area is cleaned and waste material is removed and disposed of safely</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4. Barriers and signs are removed and stored 3.5. Workplace documentation/reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate coating problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate coating material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - solvent coating techniques
- seek learning opportunities
- use the workplace technology related to the application of finishes including tools, equipment, calculators and measuring devices
- interpret the technical specifications of materials and analyse their properties to optimise their use

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the application of finishing systems
- organisational and site standards, requirements, policies and procedures for finishing and coating
- methods of floor preparation from basic sanding to finishing sanding and edging
- characteristics of timber floor finishing in relation to ventilation, moisture content

REQUIRED SKILLS AND KNOWLEDGE

- and reaction to change of temperature and relative humidity
- type, characteristics, uses and limitation of solvent coating materials, including manufacturer recommendations
- types and uses of floor finishing tools and equipment
- workplace safety systems related to floor finishing processes
- work flow in relation to the application of solvent coatings to timber floors
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for applying finishes to timber, parquetry and cork floors
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Establish and maintain appropriate ventilation
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - minimise the risk of injury to self and others
 - achieve a final finish in accordance with Australian Standards and accepted industry practices
- Complete a minimum of:
 - application of two different solvent based products to two different timber species
- Identify faults/problems and identify and carry out corrective action
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • a realistic finishing requirement • materials and equipment relevant to the coating application • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting

RANGE STATEMENT	
	<p>and communications</p> <ul style="list-style-type: none"> • Manufacturer recommendations for the use of equipment and materials
Solvent coating materials	<ul style="list-style-type: none"> • may include but are not limited to resin solutions, epoxy resins, two can epoxy resins, two can polyurethanes, and moisture curing polyurethanes which may have matt, satin or gloss finish
Tools and equipment	<ul style="list-style-type: none"> • are to include orbital sander, rotary sander, hand sander, vacuum cleaner, brushes, applicators, rollers, roller tray, hammer, nail punch and spatula
Surfaces to be finished	<ul style="list-style-type: none"> • may include traditional tongue and groove strip flooring, gluedown or floating strip flooring, engineered timber flooring and block or mosaic parquet flooring
Surface inspection	<ul style="list-style-type: none"> • is to ensure that surface is free from dust and debris, moisture content is acceptable and stable and any preservatives, protective coatings or other contaminants are adequately removed
Work sequence	<ul style="list-style-type: none"> • is to include preparation, inspection, coating application(s) and intermediate steps, finalisation and acceptance inspection
Workplace health and safety requirements	<ul style="list-style-type: none"> • may include personal protective equipment which is to include that prescribed under legislation, regulation and enterprise policies and practices • may include isolation processes including barriers, tapes and entry access controls • may include breathing support and ventilation extraction systems
Application methods	<ul style="list-style-type: none"> • may include rags, brushes, rollers, applicators and spatula

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Sanding and finishing
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Co-requisite units

Co-requisite units		

LMFFL3403A Apply water-based coatings to timber flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to select water-based coating systems appropriate for the job, to prepare for the work and to apply the selected coatings to timber and parquet floors.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and prepare for work requirements	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the application of finishes are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Coating material is selected with regard to durability, longevity, aesthetics, manufacturer recommendations and client expectations</p> <p>1.4. Selected coating materials are assessed as being compatible with each other, with the surface to be finished and with manufacturer recommendations</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Surface to be finished is inspected and assessed as being ready for coating</p> <p>1.7. Work sequence is planned to ensure efficiency and quality of application</p> <p>1.8. Workplace health and safety requirements, including isolation, ventilation and other personal protection needs, are observed throughout the work</p>
2. Apply finishing system	<p>2.1. Ventilation is checked before chemical fumes are released, and all OHS requirements are met including use of personal protective equipment</p> <p>2.2. Environmental protection regulations are complied with</p> <p>2.3. Coating material is applied in accordance with manufacturer recommendations</p> <p>2.4. Recommended drying times between coats are observed</p> <p>2.5. Buffing or sanding between coats, where required, is carried out according to manufacturer recommendations</p> <p>2.6. Final finish meets the requirements of the job</p>
3. Complete housekeeping	<p>3.1. Unused materials are resealed and stored</p> <p>3.2. Tools and equipment are cleaned, maintained and stored</p> <p>3.3. Work area is cleaned and waste material is removed and disposed of safely</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4. Barriers and signs are removed and stored 3.5. Workplace documentation/reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Collect, organise and understand information related to work orders, basic plans and safety procedures
- Communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- Use pre-checking and inspection techniques to anticipate coating problems to avoid re-work and wastage
- Recognise and respond to circumstances outside instructions or personal competence
- Plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate coating material requirements
- Clarify and confirm work instructions
- Plan work within given task parameters
- Accept responsibility for given tasks
- Set, monitor and satisfy personal work goals
- Satisfy the competency requirements for the job
- Maintain current knowledge of:
 - tools and materials
 - water-based coating techniques
- Seek learning opportunities
- Use the workplace technology related to the application of finishes including tools, equipment, calculators and measuring devices
- Interpret the technical specifications of materials and analyse their properties to optimise their use

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the application of finishing systems
- Organisational and site standards, requirements, policies and procedures for finishing and coating
- Methods of floor preparation from basic sanding to finishing sanding and edging
- Characteristics of timber floor finishing in relation to ventilation, moisture content

REQUIRED SKILLS AND KNOWLEDGE

- and reaction to change of temperature and relative humidity
- Type, characteristics, uses and limitations of water-based coating materials, including manufacturer recommendations
- Types and uses of floor finishing tools and equipment
- Workplace safety systems related to cork floor finishing processes
- Work flow in relation to the application of water-based coatings to timber floors
- Environmental protection requirements
- Established communication channels and protocols
- Problem identification and resolution
- Appropriate mathematical procedures for estimation and measurement
- Procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for applying finishes to timber, parquetry and cork floors
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Establish and maintain appropriate ventilation
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - minimise the risk of injury to self and others
 - achieve a final finish in accordance with Australian Standards and accepted industry practices
- Complete a minimum of:
 - application of two different water-based products to two different timber species
- Identify faults/problems and identify and carry out corrective action
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • a realistic finishing requirement • materials and equipment relevant to the coating application • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process.</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment Workplace instructions, including job sheets, plans, drawings and designs Workplace procedures relating to reporting

RANGE STATEMENT	
	<p>and communications</p> <ul style="list-style-type: none"> • Manufacturer recommendations for the use of equipment and materials
Water-based coating materials	<ul style="list-style-type: none"> • include but are not limited to water-based polyurethanes which may have matt, satin or gloss finish
Tools and equipment	<ul style="list-style-type: none"> • are to include orbital sander, rotary sander, hand sander, vacuum cleaner, brushes, applicators, rollers, roller tray, hammer, nail punch and spatula
Surfaces to be finished	<ul style="list-style-type: none"> • may include traditional tongue and grove strip flooring, gluedown or floating strip flooring, engineered timber flooring and block or mosaic parquetry flooring
Surface inspection	<ul style="list-style-type: none"> • is to ensure that surface is free from dust and debris, moisture content is acceptable and stable and any preservatives, protective coatings or other contaminants are adequately removed
Work sequence	<ul style="list-style-type: none"> • is to include preparation, inspection, coating application(s) and intermediate steps, finalisation and acceptance inspection
Workplace health and safety requirements	<ul style="list-style-type: none"> • may include personal protective equipment which is to include that prescribed under legislation, regulation and enterprise policies and practices • may include isolation processes including barriers, tapes and entry access controls • may include breathing support and ventilation extraction systems
Application methods	<ul style="list-style-type: none"> • may include rags, brushes, rollers, applicators and spatula

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Sanding and finishing
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Co-requisite units

Co-requisite units		

LMFFL3404A Apply oil-based coatings to timber flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to select oil-based coating systems appropriate for the job, to prepare for the work and to apply the selected coatings to timber and parquet floors.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Identify and prepare for work requirements</p>	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the application of finishes are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Coating material is selected with regard to durability, longevity, aesthetics, manufacturer recommendations and client expectations</p> <p>1.4. Selected coating materials are assessed as being compatible with each other, with the surface to be finished and with manufacturer recommendations</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Surface to be finished is inspected and assessed as being ready for coating</p> <p>1.7. Work sequence is planned to ensure efficiency and quality of application</p> <p>1.8. Workplace health and safety requirements, including isolation, ventilation and other personal protection needs, are observed throughout the work</p>
<p>2. Apply finishing system</p>	<p>2.1. Ventilation is checked before chemical fumes are released, and all OHS requirements are met including use of personal protective equipment</p> <p>2.2. Environmental protection regulations are complied with</p> <p>2.3. Coating material is applied in accordance with manufacturer recommendations</p> <p>2.4. Recommended drying times between coats are observed</p> <p>2.5. Buffing or sanding between coats, where required, is carried out according to manufacturer recommendations</p> <p>2.6. Final finish meets the requirements of the job</p>
<p>3. Complete housekeeping</p>	<p>3.1. Unused materials are resealed and stored</p> <p>3.2. Tools and equipment are cleaned, maintained and stored</p> <p>3.3. Work area is cleaned and waste material is removed and disposed of safely</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4. Barriers and signs are removed and stored 3.5. Workplace documentation/reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate coating problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate coating material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - oil-based coating techniques
- seek learning opportunities
- use the workplace technology related to the application of finishes, including tools, equipment, calculators and measuring devices
- interpret the technical specifications of materials and analyse their properties to optimise their use

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the application of finishing systems
- organisational and site standards, requirements, policies and procedures for finishing and coating
- methods of floor preparation from basic sanding to finishing sanding and edging
- characteristics of timber floor finishing in relation to ventilation, moisture content

REQUIRED SKILLS AND KNOWLEDGE

- and reaction to change of temperature and relative humidity
- type, characteristics, uses and limitation of oil-based coating materials, including manufacturer recommendations
- types and uses of floor finishing tools and equipment
- workplace safety systems related to cork floor finishing processes
- work flow in relation to the application of oil-based coatings to timber floors
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for applying finishes to timber, parquetry and cork floors
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Establish and maintain appropriate ventilation
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - minimise the risk of injury to self and others
 - achieve a final finish in accordance with Australian Standards and accepted industry practices
- Complete a minimum of:
 - application of two different oil-based products to two different timber species
- Identify faults/problems and identify and carry out corrective action
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • a realistic finishing requirement • materials and equipment relevant to the coating application • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting

RANGE STATEMENT	
	<p>and communications</p> <ul style="list-style-type: none"> • Manufacturer recommendations for the use of equipment and materials
Oil-based coating materials	<ul style="list-style-type: none"> • may include but are not limited to waxes, oils, oleoresins and one can urethane oils
Tools and equipment	<ul style="list-style-type: none"> • are to include orbital sander, rotary sander, hand sander, vacuum cleaner, brushes, applicators, rollers, roller tray, hammer, nail punch and spatula
Surfaces to be finished	<ul style="list-style-type: none"> • may include traditional tongue and grove strip flooring, gluedown or floating strip flooring, engineered timber flooring and block or mosaic parquetry flooring
Surface inspection	<ul style="list-style-type: none"> • is to ensure that surface is free from dust and debris, moisture content is acceptable and stable and any preservatives, protective coatings or other contaminants are adequately removed
Work sequence	<ul style="list-style-type: none"> • is to include preparation, inspection, coating application(s) and intermediate steps, finalisation and acceptance inspection
Workplace health and safety requirements	<ul style="list-style-type: none"> • may include personal protective equipment which is to include that prescribed under legislation, regulation and enterprise policies and practices • may include isolation processes including barriers, tapes and entry access controls • may include breathing support and ventilation extraction systems
Application methods	<ul style="list-style-type: none"> • may include rags, brushes, rollers, applicators and spatula

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Sanding and finishing
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Co-requisite units

Co-requisite units		

LMFFL3405A Apply composite based coatings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to select composite base coating systems appropriate for the job, to prepare for the work and to apply the selected coatings to floors.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Identify and prepare for work requirements</p>	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the application of finishes are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Coating material is selected with regard to durability, longevity, aesthetics, manufacturer recommendations and client expectations</p> <p>1.4. Selected coating materials are assessed as being compatible with each other, with the surface to be finished and with manufacturer recommendations</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Surface to be finished is inspected and assessed as being ready for coating with the selected coating system</p> <p>1.7. Work sequence is planned to ensure efficiency and quality of application</p> <p>1.8. Workplace health and safety requirements, including isolation, ventilation and other personal protection needs, are observed throughout the work</p>
<p>2. Apply finishing system</p>	<p>2.1. Ventilation is checked before chemical fumes are released, and all OHS requirements are met including use of personal protective equipment</p> <p>2.2. Environmental protection regulations are complied with</p> <p>2.3. Coating material is prepared as per manufacturers specifications.</p> <p>2.4. Coating material is applied in accordance with manufacturer recommendations</p> <p>2.5. Recommended drying times between coats are observed</p> <p>2.6. Buffing or sanding between coats, where required, is carried out according to manufacturer recommendations</p> <p>2.7. Final finish meets the requirements of the job</p> <p>2.8. Floor maintenance instructions and warranty provisions are provided to the client in accordance with workplace procedures</p>

ELEMENT	PERFORMANCE CRITERIA
3. Complete housekeeping	3.1. Unused materials are resealed and stored 3.2. Tools and equipment are cleaned, maintained and stored 3.3. Work area is cleaned and waste material is removed and disposed of safely 3.4. Barriers and signs are removed and stored 3.5. Workplace documentation/reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate coating problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate coating material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - composite based coating techniques
- seek learning opportunities
- use the workplace technology related to the application of finishes including tools, equipment, calculators and measuring devices
- interpret the technical specifications of materials and analyse their properties to optimise their use

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the application of finishing systems
- organisational and site standards, requirements, policies and procedures for finishing and coating
- methods of floor preparation from basic sanding to finishing sanding and edging
- characteristics of floor finishing in relation to ventilation, moisture content of

REQUIRED SKILLS AND KNOWLEDGE

- timber, timber species and reaction to change of temperature and relative humidity
- type, characteristics, uses and limitation of composite based coating materials including manufacturer recommendations
- types and uses of floor finishing tools and equipment
- workplace safety systems related to floor finishing processes
- work flow in relation to the application of composite based coatings to timber floors
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- appropriate mathematical procedures for measurement and estimation of composite based coatings for a given area
- procedures for the recording, reporting and maintenance of workplace records and information.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for applying finishes to strip timber and parquetry flooring
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Establish and maintain appropriate ventilation
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - minimise the risk of injury to self and others
 - achieve a final finish in accordance with Australian Standards and accepted industry practices
- Complete a minimum of:
 - application of two different composite based products to two different timber species, one to strip timber flooring and one to parquetry flooring
- Identify faults/problems and identify and carry out corrective action
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • workplace location or simulated workplace • a realistic finishing requirement • materials and equipment relevant to the coating application • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment Workplace instructions, including job sheets, plans, drawings and designs Workplace procedures relating to reporting

RANGE STATEMENT	
	<p>and communications</p> <ul style="list-style-type: none"> • Manufacturer recommendations for the use of equipment and materials
Composite based coating materials	<ul style="list-style-type: none"> • may include but are not limited to oil modified urethanes (OMU) and Urethane oil/alkyd 'tung oil' based finishes which may provide a subdued, satin to semi-gloss appearance and are unlikely to edge bond boards. They darken with time and require more frequent maintenance particularly in high traffic areas. Acrylic floor polishes may be used to protect the finish.
Tools and equipment	<ul style="list-style-type: none"> • are to include brooms, brushes, vacuum cleaner, paint brushes, applicators, paint rollers, roller tray, spatula and masking tape and plastic sheeting.
Surfaces to be finished	<ul style="list-style-type: none"> • may include traditional tongue and groove strip timber flooring and block or mosaic parquetry flooring.
Surface inspection	<ul style="list-style-type: none"> • is to ensure that surface is free from dust and debris, moisture content is acceptable and stable and any preservatives, protective coatings or other contaminants are adequately removed
Work sequence	<ul style="list-style-type: none"> • is to include preparation, inspection, coating application(s) and intermediate steps, finalisation and acceptance inspection
Workplace health and safety requirements	<ul style="list-style-type: none"> • may include personal protective equipment which is to include that prescribed under legislation, regulation and enterprise policies and practices • may include isolation processes including barriers, tapes and entry access controls • may include breathing support and ventilation extraction systems
Application methods	<ul style="list-style-type: none"> • may include, brushes, rollers and applicators.

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Sanding and finishing
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Co-requisite units

Co-requisite units		

LMFFL3406A Apply emulsion wax

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to select emulsion wax coating systems appropriate for the job, to prepare for the work and to apply selected coatings.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Identify and prepare for work requirements</p>	<p>1.1. Applicable legislative, <i>OHS</i> and <i>organisational requirements</i> relevant to the application of finishes are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. <i>Coating material</i> is selected with regard to durability, longevity, aesthetics, manufacturer recommendations and the client's expectations</p> <p>1.4. Selected coating materials are assessed as being compatible with each other, with the surface to be finished and with manufacturer recommendations</p> <p>1.5. <i>Tools, equipment</i> and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. <i>Surface to be finished</i> is <i>inspected</i> and assessed as being ready for coating</p> <p>1.7. <i>Work sequence</i> is planned to ensure efficiency and quality of application</p> <p>1.8. <i>Workplace health and safety requirements</i>, including isolation, ventilation and other personal protection needs, are observed throughout the work</p>
<p>2. Apply finishing system</p>	<p>2.1. Ventilation is checked before chemical fumes are released, and all OHS requirements are met including use of personal protective equipment</p> <p>2.2. Environmental protection regulations are complied with</p> <p>2.3. Coating material is prepared as per manufacturer specifications.</p> <p>2.4. Coating material is <i>applied</i> in accordance with manufacturer recommendations</p> <p>2.5. Recommended drying times between coats are observed</p> <p>2.6. Buffing or sanding between coats, where required, is carried out according to manufacturer recommendations</p> <p>2.7. Final finish meets the requirements of the job</p> <p>2.8. Floor maintenance instructions and warranty provisions are provided to the client in accordance with workplace procedures</p>

ELEMENT	PERFORMANCE CRITERIA
3. Complete housekeeping	3.1. Unused materials are resealed and stored 3.2. Tools and equipment are cleaned, maintained and stored 3.3. Work area is cleaned and waste material is removed and disposed of safely 3.4. Barriers and signs are removed and stored 3.5. Workplace documentation/reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Collect, organise and understand information related to work orders, basic plans and safety procedures
- Communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- Work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- Use pre-checking and inspection techniques to anticipate coating problems to avoid re-work and wastage
- Recognise and respond to circumstances outside instructions or personal competence
- Plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate coating material requirements
- Clarify and confirm work instructions
- Plan work within given task parameters
- Accept responsibility for given tasks
- Set, monitor and satisfy personal work goals
- Satisfy the competency requirements for the job
- Maintain current knowledge of:
 - tools and materials
 - emulsion and wax coating techniques
- seek learning opportunities
- use the workplace technology related to the application of finishes including tools, equipment, calculators and measuring devices
- interpret the technical specifications of materials and analyse their properties to optimise their use

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the application of finishing systems
- organisational and site standards, requirements, policies and procedures for finishing and coating
- methods of floor preparation from basic sanding to finishing sanding and edging
- characteristics of floor finishing in relation to ventilation, moisture content and

REQUIRED SKILLS AND KNOWLEDGE

- reaction to change of temperature and relative humidity
- type, characteristics, uses and limitation of emulsion and wax coating materials, including manufacturer recommendations
- types and uses of floor finishing tools and equipment
- workplace safety systems related to floor finishing processes
- work flow in relation to the application of emulsion and wax coatings to timber floors
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for applying finishes to timber, parquetry and cork floors
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Establish and maintain appropriate ventilation
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - minimise the risk of injury to self and others
 - achieve a final finish in accordance with Australian Standards and accepted industry practices
- Complete a minimum of:
 - application of two different emulsion wax products to two different timber/cork flooring types
- Identify faults/problems and identify and carry out corrective action
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • workplace location or simulated workplace • a realistic finishing requirement • materials and equipment relevant to the coating application • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting

RANGE STATEMENT	
	<p>and communications</p> <ul style="list-style-type: none"> • Manufacturer recommendations for use of equipment and materials
Emulsion wax coating materials	<ul style="list-style-type: none"> • may include but are not limited to emulsions with insoluble polymers suspended in water using emulsifiers to produce waterborne coatings of non-water soluble ingredients, which may have matt, satin or gloss finish depending on buffing procedures.
Tools and equipment	<ul style="list-style-type: none"> • are to include rotary polishing machine, vacuum cleaner, brushes, applicators, rollers, roller tray.
Surfaces to be finished	<ul style="list-style-type: none"> • may include traditional tongue and groove strip timber flooring, glue down or floating strip flooring, engineered timber flooring, cork flooring and block or mosaic parquet flooring
Surface inspection	<ul style="list-style-type: none"> • is to ensure that surface is free from dust and debris, moisture content is acceptable and stable and any preservatives, protective coatings or other contaminants are adequately removed
Work sequence	<ul style="list-style-type: none"> • is to include preparation, inspection, coating application(s) and intermediate steps, finalisation and acceptance inspection
Workplace health and safety requirements	<ul style="list-style-type: none"> • may include personal protective equipment which is to include that prescribed under legislation, regulation and enterprise policies and practices • may include isolation processes including barriers, tapes and entry access controls • may include breathing support and ventilation extraction systems
Application methods	<ul style="list-style-type: none"> • may include brushes, rollers, applicators

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Sanding and finishing
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Co-requisite units

Co-requisite units		

LMFFL3407A Apply stains and fillers

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to select stains and fillers appropriate for the job, to prepare for the work and to apply the selected stains and fillers.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Identify and prepare for work requirements</p>	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the application of finishes are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Stain and filling material is selected with regard to durability, longevity, aesthetics, manufacturer recommendations and client expectations</p> <p>1.4. Selected stain and filler materials are assessed as being compatible with each other, with the surface to be finished, and with manufacturer recommendations</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Products with surface or other faults are identified and faults repaired as appropriate.</p> <p>1.7. Surface to be stained and or filled is inspected and assessed as being ready for coating with the selected stain/filler</p> <p>1.8. Work sequence is planned to ensure efficiency and quality of application</p> <p>1.9. Workplace health and safety requirements, including isolation, ventilation and other personal protection needs, are observed throughout the work</p>
<p>2. Apply finishing system</p>	<p>2.1. Ventilation is checked before chemical fumes are released, and all OHS requirements are met including use of personal protective equipment</p> <p>2.2. Environmental protection regulations are complied with</p> <p>2.3. Staining and or filling material is prepared as per manufacturer specifications.</p> <p>2.4. Trial applications of stains and or fillers are made to check equipment operation, materials consistency, viscosity and specified colour</p> <p>2.5. Faults and or inconsistencies in colour are identified and workplace procedures for rectification and adjustment are followed</p> <p>2.6. Staining and or filling material is applied in accordance with manufacturer recommendations</p> <p>2.7. Recommended drying times between coats are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>observed</p> <p>2.8. Buffing or sanding between coats, where required, is carried out according to manufacturer recommendations</p> <p>2.9. Finished products are inspected and approved for suitability for further processing</p> <p>2.10. Final finish meets the requirements of the job</p>
3. Complete housekeeping	<p>3.1. Unused materials are resealed and stored</p> <p>3.2. Tools and equipment are cleaned, maintained and stored</p> <p>3.3. Work area is cleaned and waste material is removed and disposed of safely</p> <p>3.4. Barriers and signs are removed and stored</p> <p>3.5. Workplace documentation/reporting is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate staining and filling problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate staining and filling material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - staining and filling techniques of timber floors
- seek learning opportunities
- use the workplace technology related to the application of stains and fillers including tools, equipment, calculators and measuring devices
- interpret the technical specifications of materials and analyse their properties to optimise their use

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the application of finishing systems
- organisational and site standards, requirements, policies and procedures for finishing and coating
- methods of floor preparation from basic sanding to finishing sanding and edging
- characteristics of floor finishing in relation to ventilation, moisture content of

REQUIRED SKILLS AND KNOWLEDGE

- timber, timber species and reaction to change of temperature and relative humidity
- type, characteristics, uses and limitation of stain and filling materials, including manufacturer recommendations
- types and uses of floor staining and filling tools and equipment
- workplace safety systems related to floor staining and filling processes
- work flow in relation to the application of stains and fillers to timber floors
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- appropriate mathematical procedures for measurement, estimation and mixing of stains and fillers for a given area
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for applying finishes to timber, parquetry and cork floors
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Establish and maintain appropriate ventilation
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - minimise the risk of injury to self and others
 - achieve a final finish in accordance with Australian Standards and accepted industry practices
- Complete a minimum of:
 - select and apply a minimum of two types of stains, including: lacquer- based
 - spirit-based
- Apply fillers to a minimum of one parquetry floor and one strip floor
- Identify faults/problems and identify and carry out corrective action
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or

EVIDENCE GUIDE	
	<p>Australian Standards requirements</p> <ul style="list-style-type: none"> • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • a realistic finishing requirement • materials and equipment relevant to the coating application • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting

RANGE STATEMENT	
	<p>and communications</p> <ul style="list-style-type: none"> • Manufacturer recommendations for use of equipment and materials
Stain	<ul style="list-style-type: none"> • may include but are not limited to pigment and fade resisting stains, lacquer-based wiping stain, spirit-based stain, water and oil based stains.
Filler	<ul style="list-style-type: none"> • fillers are to include oil based, water-based and plastic (one-pot) filler
Tools and equipment	<ul style="list-style-type: none"> • may include but not limited to liquid containers, rubber gloves, face masks, brooms, brushes, vacuum cleaner, paint brushes, applicators, paint rollers, roller tray, sanding blocks, flat trowel, spatula, masking tape and plastic sheeting.
Surfaces to be finished	<ul style="list-style-type: none"> • may include solid timber and manufactured boards
Surface inspection	<ul style="list-style-type: none"> • is to ensure that surface is free from dust and debris, moisture content is acceptable and stable and any preservatives, protective coatings or other contaminants are adequately removed
Work sequence	<ul style="list-style-type: none"> • is to include preparation, inspection, coating application(s) and intermediate steps, finalisation and acceptance inspection
Workplace health and safety requirements	<ul style="list-style-type: none"> • may include personal protective equipment which is to include that prescribed under legislation, regulation and enterprise policies and practices • may include isolation processes, including barriers, tapes and entry access controls • may include breathing support and ventilation extraction systems
Application methods	<ul style="list-style-type: none"> • may include, brushes, rollers and applicators.

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Sanding and finishing
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Co-requisite units

Co-requisite units		

LMFFL3501A Adapt and apply custom designs to timber flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to prepare and present a range of design concepts as solutions to a design brief in accordance with integral design elements and principles.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select and adapt the design	1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to <i>timber flooring design</i> are verified and complied with 1.2. Client design concept is matched with <i>available custom designs</i> and the preferred design selected 1.3. Design concept is adapted to suit the dimensions of the floor area 1.4. <i>Scale representations</i> of the design application are prepared
2. Select the timber	2.1. Budget and availability constraints are used to identify realistic timber options 2.2. <i>Timber options</i> are analysed on the basis of durability, longevity, aesthetics, manufacturer recommendations and client expectations 2.3. Most appropriate timber options are selected and incorporated into the <i>job specification</i>
3. Select the finishing technique and materials	3.1. <i>Effects of finishing materials</i> on the final appearance of the design are identified and analysed 3.2. <i>Effects of the finishing techniques</i> on the final appearance of the design are identified 3.3. Finishing techniques and materials which best complement the design aesthetics are selected and incorporated into the job specification
4. Finalise the job specification	4.1. Job specifications covering <i>working drawings, material specifications</i> and costs are finalised 4.2. Client approval for the job specification is obtained

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable the clarification of customer requirements and the compilation/presentation of job proposals and specifications
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise creativity
- use pre-checking and inspection techniques to anticipate design adaptation and application problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- encourage clients to consider innovative solutions
- plan and organise activities including the preparation and layout of the worksite and the obtaining of information and planning data to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements and costs
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - materials
 - timber flooring design options
- seek learning opportunities
- use the workplace technology including design software, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to timber flooring operations
- organisational and site standards, requirements, policies and procedures for timber flooring operations
- types, characteristics, uses and limitations of commonly used flooring timbers
- types, characteristics, uses, limitations and effects on timber of finishing materials
- availability and costs of flooring timbers
- manual and computer-aided drafting techniques

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• established communication channels and protocols• problem identification and resolution• appropriate mathematical procedures for estimation and measurement |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for preparing and presenting design information
- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Adapt a minimum of two custom designs for timber flooring, including the preparation of detailed job specifications with:
 - one for a strip floor
 - one for a parquetry floor
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - realistic tasks covering a strip floor and parquetry floor
 - a range of custom designs
 - workplace location or simulated workplace

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • information and equipment relevant to adapting and presenting design information • a client/simulated client
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling, including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Timber flooring design	<ul style="list-style-type: none"> refers to the pattern, logo or motif that is being incorporated into the timber floor
Available custom designs	<ul style="list-style-type: none"> are those created by others, including material providers, manufacturers and professional design outlets and made available through

RANGE STATEMENT	
	complementary or commercial means
Scale representations	<ul style="list-style-type: none"> depict the adaptation of the custom design to the specific dimensions of the intended flooring coverage and may be prepared manually or using computer-aided means
Timber options	<ul style="list-style-type: none"> include those timbers which are within the cost envelope and are capable of being used to achieve the design requirements in terms of colour, texture, hardness, workability, compatibility and endurance
Job specification	<ul style="list-style-type: none"> are to include the measurements, materials to be used and the preparation and application processes/procedures to be followed
Effect of finishing materials	<ul style="list-style-type: none"> include the colour matching/contrast requirements as well as durability, moisture management and other protection control requirements
Effects of finishing techniques	<ul style="list-style-type: none"> include the impact and effects of securing filling and sanding
Working drawings	<ul style="list-style-type: none"> may include but not be limited to drafted technical drawings or drawings produced on computer using computer aided drafting software packages
Material specifications	<ul style="list-style-type: none"> are to include the materials, construction methods and procedures, finishing methods and techniques, compatibility requirements and limitations and relevant national and industry standards

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units		

LMFFL3502A Cut and install timber flooring materials to stairs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to install timber flooring materials to stairs and steps.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at the trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare materials for installation	1.1. Applicable legislative, OHS and organisational requirements relevant to the installing timber flooring materials to stairs and steps are verified and complied with 1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks 1.3. Floor condition is assessed for suitability for installation of timber flooring to stairs 1.4. Stairway or step are measured and the required amount flooring materials is calculated 1.5. Suitable adhesives, trims and accessories are selected if required 1.6. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 1.7. Sequence of work is planned, including a starting point, to ensure efficiency and quality of installation
2. Set out materials for installation	2.1. Timber flooring to be installed is checked against order 2.2. Timber flooring is acclimatised according to manufacturer recommendations 2.3. Materials for fixing is organised and used in accordance with relevant safety management requirements 2.4. Working lines and starting point are established
3. Lay out flooring material	3.1. Instructions and sequence for laying and fixing are followed 3.2. Materials are laid out to meet any design and specification requirements and minimise waste 3.3. The aesthetics of the materials are maximised including matching grains and colours 3.4. Underlay (if required) is checked against specified type, manufacturer recommendations and fitting 3.5. Any remedial work to stairway is carried out
4. Install flooring material	4.1. Flooring materials are cut following workplace procedures 4.2. Underlay (if required) is installed following manufacturer recommendations 4.3. Fixing methods and equipment are used following

ELEMENT	PERFORMANCE CRITERIA
	manufacturer recommendations 4.4. Flooring materials are installed to specifications to the sub floor following workplace procedures 4.5. Finished stairway is checked for flaws in installation and materials and faults rectified
5. Complete housekeeping	5.1. Unused materials are stored or recycled as required 5.2. Tools and equipment are cleaned and stored appropriately 5.3. Work area is cleaned and rubbish is disposed of appropriately 5.4. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing timber flooring materials to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - parquetry installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installing timber flooring materials requirement including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the installation of timber flooring to stairs
- organisational and site standards, requirements, policies and procedures for the installation of timber flooring to stairs
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information
- types, characteristics, uses and limitations of timber flooring materials
- types and uses of timber flooring cutting and installation tools, equipment and materials
- characteristics of timber and monolithic sub floors
- techniques for preparing sub floors
- techniques and requirements for conducting moisture testing
- workplace safety system requirements relating to cutting and installing timber flooring materials
- work flow in relation to the installing of timber flooring materials, including cork, parquetry, floating floors and strip timber floors (non-structural)

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing timber flooring materials to stairs
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
 - conduct appropriate moisture testing
- Complete a minimum of three types of the timber flooring material installation to stairs from the following different options:
 - floating
 - strip timber flooring
 - cork
 - parquetry
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • a realistic installation requirement • workplace location or simulated workplace • materials and equipment relevant to the installation of timber flooring materials to stairs • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Timber flooring materials	<ul style="list-style-type: none"> may include cork, parquetry, floating floors and strip timber floors (non-structural)
Stairs and steps	<ul style="list-style-type: none"> may include but are not limited to open newel, bullnose steps, circular, recessed steps, open tread, box steps and kite winder treads

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • are to include hammer, compressor, staple gun, bar scribe, utility knife, straight edge, drill, hand saw, chisels, drop saw, nail gun, planer, circular saw and combination saw
Materials	<ul style="list-style-type: none"> • may include but not be limited to cork, parquetry, floating floor and strip flooring materials, underlay, adhesives, nails, trims, nosing and accessories

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units	

LMFFL3503A Install direct stick timber flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to directly stick a pre-finished, engineered or direct stick timber floor within a space to a hard underlay base or sub-floor.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at the trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational requirements</i> relevant to the installation of <i>direct stick timber flooring</i> are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Sub-floor condition is assessed for suitability for installation of direct stick timber flooring consistent with Australian Standards, industry standards and manufacturer recommendations</p> <p>1.4. Suitable underlays, <i>adhesives</i>, trims and accessories are selected as required.</p> <p>1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out materials for installation	<p>2.1. Pre-finished, engineered or direct stick timber flooring are acclimatised according to manufacturer recommendations</p> <p>2.2. Pre-finished, engineered or direct stick timber flooring for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.3. Skirting boards or cover trims are removed or undercut if required and stored for refitting or sent for machining</p> <p>2.4. Adhesives and edge direct sticks are prepared for use as required</p> <p>2.5. Working lines and starting point are established</p>
3. Cut flooring	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Appropriate underlay is laid according to manufacturer recommendations</p> <p>3.3. Pre-finished, engineered or direct stick timber flooring are laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate</p> <p>3.4. The aesthetics of the materials are maximised where appropriate, matching grains and colours</p> <p>3.5. Pre-finished, engineered or direct stick timber</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>flooring materials are accurately and clearly marked for cutting</p> <p>3.6. Timber battens are accurately and clearly marked for cutting</p> <p>3.7. Timber flooring is cut to length and size for final laying ensuring minimum waste</p>
4. Lay flooring	<p>4.1. Materials for fixing are organised and used in accordance with relevant safety management requirements</p> <p>4.2. Adhesives and edge direct sticks/accessories are prepared for use as required</p> <p>4.3. Fixing methods and equipment are used following manufacturer recommendations</p> <p>4.4. Appropriate field and perimeter expansion joints are allowed</p> <p>4.5. Skirting boards or cover trims are fitted/re-fitted and finished</p> <p>4.6. Finished job is inspected and any imperfections are rectified following workplace procedures</p>
5. Complete housekeeping	<p>5.1. Unused materials are stored or recycled as required</p> <p>5.2. Tools and equipment are cleaned and stored appropriately</p> <p>5.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>5.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing direct stick timber flooring to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - parquetry installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installing direct stick timber flooring including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installation of direct stick timber flooring
- organisational and site standards, requirements, policies and procedures for the installation of direct stick timber flooring
- environmental protection requirements
- types, characteristics, uses and limitations of:
 - direct stick timber flooring installed
 - installation adhesives

REQUIRED SKILLS AND KNOWLEDGE

- types and uses of tools and equipment used during the installation of direct stick timber flooring
- basic wood working techniques relevant to the installation of timber direct stick flooring installed
- workplace safety system requirements relevant to the installation of direct stick timber flooring
- work flow in relation to the laying of direct stick timber flooring operations
- characteristics and requirements of sub-floor preparation
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing direct stick timber flooring on battens
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of three installations of the following types of installation:
 - glue-together system
 - direct stick system
 - self locking system
 - inserted plastic tongue system
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - a realistic direct stick timber floor installation

EVIDENCE GUIDE	
	<p>requirement</p> <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to installing direct stick timber flooring • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Direct stick timber flooring	<ul style="list-style-type: none"> includes direct stick tongue and groove floating floors and manufactured engineered flooring used for indoor sporting applications
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Workplace instructions, instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • are to include PVA, epoxies and polyurethane elastomeric
Tools and equipment	<ul style="list-style-type: none"> • are to include drop saw, jig saw, hand saw, undercut saw, plunge saw, hammer, bar scriber and utility knife • may include circular saw, bench saw, straight edge, cramps, clamps, staple gun, secret nailer, roller, flooring cramps, strap clamps, wall clamps, sanding machines (drum, belt and rotary) and edger
Materials	<ul style="list-style-type: none"> • may include but not be limited to flooring materials, underlay, edge direct sticks, tapes, adhesives, metal fixings

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units	

LMFFL3504A Inspect defective timber flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to prepare for, carry out, and report on inspections on defective timber flooring.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker or supervisory level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for the inspection	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the inspection of timber flooring are verified and complied with</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.3. The purpose, scope, formality and reporting requirements for the inspection are identified, clarified and agreed</p> <p>1.4. The need for and liability associated with for the outcome of <i>invasive inspection techniques</i> are documented and agreed</p> <p>1.5. Tools, equipment and materials required for the inspection are selected and checked prior to use to ensure that they are appropriate for the work and in a safe condition</p> <p>1.6. Sequence of work is planned to ensure efficiency and quality of outcome</p>
2. Conduct the inspection	<p>2.1. Initial visual and other non-invasive inspections are completed to identify and isolate further inspection needs</p> <p>2.2. <i>Finishing faults</i> and remedial options are identified and analysed</p> <p>2.3. <i>Structural faults</i> and remedial options are identified and analysed</p> <p>2.4. <i>Material faults</i> including infestation and moisture effects and remedial options are identified and analysed</p> <p>2.5. <i>Sub-floor faults</i>, their impacts and remedial options are identified and analysed</p> <p>2.6. Areas invasively inspected are made safe</p>
3. Report on the inspection	<p>3.1. The inspection report addresses the agreed terms of reference</p> <p>3.2. The report clearly identifies the scope of the inspection, the findings and the suggested options for addressing the faults or findings</p> <p>3.3. The report is presented to the client together with any required clarification</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of inspection requirements and specifications, coordination of work with other workers and customers, and the reporting of inspection outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to facilitate and ease inspections
- use pre-checking and checking techniques to anticipate inspection problems to avoid re-work and wastage
- apply cause and effect analytical tools in floor inspection
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of information, equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and confirm inspections findings
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - timber flooring techniques
- seek learning opportunities
- use the workplace technology related to the timber flooring inspections including computers, tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the inspection of timber floors
- organisational and site standards, requirements, policies and procedures for the inspection of timber floor
- legal prerogatives and responsibilities for invasive inspection techniques and effects
- commonly experienced:

REQUIRED SKILLS AND KNOWLEDGE

- finishing faults and repair/restoration options
- structural faults and repair/restoration options
- material faults and repair/restoration options
- sub-floor faults and repair/restoration options
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for inspecting timber flooring
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Inspect and correctly report on two timber floors where one requires invasive inspection techniques
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - realistic inspection requirements
 - a client/simulated client
 - workplace location or simulated workplace
 - materials and equipment relevant to inspection and presentation of findings

Method of assessment

Assessment must satisfy the endorsed assessment

EVIDENCE GUIDE

guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Invasive inspection techniques	<ul style="list-style-type: none"> are those which require significant removal of coatings and materials and where restoration is required, regardless of the inspection finding
Finishing faults	<ul style="list-style-type: none"> may include contaminated coating (dust, foreign objects), coating rejection, incorrect

RANGE STATEMENT	
	coating, swirl marks, scratches, drum marks, waves, taper tracks, striations, rippers, chatter marks and edgebonding
Structural faults	<ul style="list-style-type: none"> may include splits, cracks, broken boards, failed fixings and incorrect board size
Materials faults	<ul style="list-style-type: none"> may include warp, wane, curvature, shakes, insect defects, knots and resin pockets
Sub-floor faults	<ul style="list-style-type: none"> may include incorrect levels, soundness and moisture

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units	

LMFFL3505A Install block parquet flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to prepare, set out, cut and install block parquet flooring in domestic and commercial sites
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at the trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the installation of block parquetry are verified and complied with</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.3. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.4. Sub-floor condition is assessed for suitability for installation of block parquetry flooring consistent with Australian Standards, industry standards and manufacturer recommendations</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Skirting boards or cover trims are removed or undercut if required and stored for re-fitting</p> <p>1.7. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out block parquetry flooring	<p>2.1. Block parquetry flooring are acclimatised according to manufacturer recommendations</p> <p>2.2. Block parquetry flooring for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.3. Adhesives and edge strips are prepared for use as required</p> <p>2.4. Area to be covered is measured, working lines and starting point are established</p>
3. Layout and cut parquetry blocks	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Appropriate underlay is laid according to manufacturer recommendations</p> <p>3.3. Block parquetry flooring is laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins</p> <p>3.4. The aesthetics of the materials are maximised, including matching grains and colours</p> <p>3.5. Parquetry blocks are accurately and clearly marked for cutting</p>

ELEMENT	PERFORMANCE CRITERIA
	3.6. Parquetry blocks are cut where required to provide appropriate size and shape ensuring minimum waste
4. Install block parquetry	4.1. Adhesives and edge strips/accessories are prepared for use as required 4.2. Adhesives are used following workplace procedures 4.3. Fixing methods and equipment are used following manufacturer recommendations 4.4. Parquetry is installed and fixed to produce required pattern 4.5. Appropriate field and perimeter expansion joints are allowed 4.6. Skirting boards or cover trims are fitted/refitted and finished 4.7. Finished job is inspected and any imperfections are rectified following workplace procedures
5. Complete housekeeping	5.1. Off-cuts or leftover materials are collected and removed following workplace procedures 5.2. Tools and equipment are cleaned, maintained and stored 5.3. Work area is cleaned and waste material is removed and disposed of safely 5.4. Documentation/reporting is completed following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate block parquetry installation problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - parquetry installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installation of block parquetry, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installation of block parquetry
- organisational and site standards, requirements, policies and procedures for the installation of block parquetry
- environmental protection requirements
- types, characteristics, uses and limitations of block parquetry flooring
- types and uses of tools and equipment used during the installation of block parquetry flooring

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• types, uses and limitations of adhesives• workplace safety systems relevant to the installation of block parquetry flooring• work flow in relation to the laying of block parquetry flooring• appropriate mathematical procedures for estimation and measurement• procedures for the recording, reporting and maintenance of workplace records and information |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing block parquet flooring
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Establish and maintain appropriate ventilation
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - minimise the risk of injury to self and others
 - achieve a final finish in accordance with Australian Standards and accepted industry practices
- Complete a minimum of two block parquet floors, which are to include at least:
 - one personally designed pattern
 - one block floor, herringbone pattern with a two block border
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - a realistic block parquet installation requirement

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to the installation of block parquetry • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting

RANGE STATEMENT	
	and communications <ul style="list-style-type: none"> • Manufacturer instructions for the use of equipment and materials
Sub-floor assessment	<ul style="list-style-type: none"> • is to include testing for moisture content, expansion, rot, structural strength, smoothness and plane
Tools and equipment	<ul style="list-style-type: none"> • are to include drop saw, hand saw, radial arm saw, router, stringline, chalk and chalk line, square, notched trowel, moisture meter, straight edge and template • may include plunge saw, jig saw, bench saw, band saw, circular saw, planer and laser level
Materials	<ul style="list-style-type: none"> • may include underlays, adhesives, timber fillers, skirting boards, cover trims and accessories
Adhesives	<ul style="list-style-type: none"> • may include PVAs, epoxys and polyurethane elastamercs

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units	

LMFFL3506A Install cork tiles

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the competencies required to cut and install pre-finished or raw cork tiles or cork supplied in other forms, over a pre-prepared hard underlay or sub-floor.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to install <i>cork tiles</i> are verified and complied with 1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks 1.3. Floor condition is assessed for suitability for installation of cork tiles 1.4. Suitable <i>adhesives</i> , trims and accessories are selected 1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 1.6. Sequence of work is planned to correctly identify the starting point and to ensure lay out and fixing is in logical order
2. Set out materials	2.1. Cork tiles to be installed are checked against order 2.2. Cork tiles are acclimatised according to manufacturer recommendation 2.3. Materials for fixing are organised and used in accordance with relevant safety management requirements 2.4. Working lines and starting point are established
3. Lay floor covering	3.1. Instructions and sequence for laying and fixing are followed 3.2. Tiles are laid out to meet specification requirements and to minimise waste 3.3. Tile grains and patterns are matched or contrasted as appropriate 3.4. Tiles are accurately and clearly marked for cutting 3.5. Tiles are cut to required shape with minimum waste of materials and laid 3.6. Completed installation is checked for flaws in installation and materials and faults rectified
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of appropriately

ELEMENT	PERFORMANCE CRITERIA
	4.4. Workplace documentation/reporting is completed.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing cork tiles to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installation of cork tiles, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installing cork tiles
- organisational and site standards, requirements, policies and procedures for the installation of cork tiles
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

maintenance

- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- type, characteristics, uses and limitations of:
 - cork tiles
 - cork tile installation adhesives
- types and uses of tile installation tools and equipment
- workplace safety system requirements related to cork tile laying
- characteristics and requirements of sub-floor preparation
- work flow in relation to the cork tile floor covering operations

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing cork tiles
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of one installation using either a wet or dry method including basic set-out and installation
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to installing cork tiles
 - specifications and work instructions

EVIDENCE GUIDE**Method of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Cork tiles	<ul style="list-style-type: none"> may be in plain or patterned and may range from light to dark in colour and fine to coarse in grain
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • may include wet method or dry method
Tools and equipment	<ul style="list-style-type: none"> • are to include utility knife, straight edge, square, chalk-line, tape measure, serrated or flat trowel, bar scribe, dividers, hand roller, heavy roller, broom, vacuum cleaner and hammer
Materials	<ul style="list-style-type: none"> • may include but are not limited to cork tiles, adhesive, fillers, sealers and primers

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units		

LMFFL3507A Install patterned parquet flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to prepare, set out, cut and install patterned parquet flooring in domestic and commercial sites.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at the trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the installation of patterned parquetry are verified and complied with</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.3. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.4. Sub-floor condition is assessed for suitability for installation of patterned parquetry flooring consistent with Australian Standards, industry standards and manufacturer recommendations</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Skirting boards or cover trims are removed or undercut if required and stored for refitting</p> <p>1.7. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Set out patterned parquetry flooring	<p>2.1. Patterned parquetry flooring are acclimatised according to manufacturer recommendations</p> <p>2.2. Patterned parquetry flooring for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.3. Adhesives and edge strips are prepared for use as required</p> <p>2.4. Area to be covered is measured, working lines and starting point are established</p>
3. Layout and cut parquetry patterns	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Appropriate underlay is laid according to manufacturer recommendations</p> <p>3.3. Patterned parquetry flooring is laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins</p> <p>3.4. The aesthetics of the materials are maximised including matching grains and colours</p> <p>3.5. Cutting jigs for pattern components are measured and set for repetitive use</p>

ELEMENT	PERFORMANCE CRITERIA
	3.6. Parquetry blocks are set in appropriate jig and cut
4. Install patterned parquetry	<p>4.1. Adhesives and edge strips/accessories are prepared for use as required</p> <p>4.2. Adhesives are used following workplace procedures</p> <p>4.3. Fixing methods and equipment are used following manufacturer recommendations</p> <p>4.4. Parquetry is installed and fixed to produce required pattern</p> <p>4.5. Appropriate field and perimeter expansion joints are allowed</p> <p>4.6. Skirting boards or cover trims are fitted/refitted and finished</p> <p>4.7. Finished job is inspected and any imperfections are rectified following workplace procedures</p>
5. Complete housekeeping	<p>5.1. Off-cuts or leftover materials are collected and removed following workplace procedures</p> <p>5.2. Tools and equipment are cleaned, maintained and stored</p> <p>5.3. Work area is cleaned and waste material is removed and disposed of safely</p> <p>5.4. Documentation/reporting is completed following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate patterned parquetry installation problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - parquetry installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installation of patterned parquetry including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installation of patterned parquetry
- organisational and site standards, requirements, policies and procedures for the installation of patterned parquetry
- environmental protection requirements
- types, characteristics, uses and limitations of patterned parquetry flooring
- types and uses of tools and equipment used during the installation of patterned parquetry flooring

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• types, uses and limitations of adhesives• workplace safety systems relevant to the installation of patterned parquetry flooring• work flow in relation to the laying of patterned parquetry flooring• appropriate mathematical procedures for estimation and measurement• procedures for the recording, reporting and maintenance of workplace records and information. |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing patterned parquetry
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Establish and maintain appropriate ventilation
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - minimise the risk of injury to self and others
 - achieve a final finish in accordance with Australian Standards and accepted industry practices
- Complete a minimum of two patterned parquetry floors, which are to include at least:
 - one personally designed pattern
 - one patterned floor, herringbone pattern with a two patterned border
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - a realistic patterned parquetry installation requirement

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to the installation of patterned parquetry • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling, including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Instructions

- Workplace procedures relating to the use and operation of tools and equipment
- Workplace instructions, instructions, including job sheets, plans, drawings and designs
- Workplace procedures relating to reporting

RANGE STATEMENT	
	and communications <ul style="list-style-type: none"> • Manufacturer instructions for the use of equipment and materials
Sub-floor assessment	<ul style="list-style-type: none"> • is to include testing for moisture content, expansion, rot, structural strength, smoothness and plane
Tools and equipment	<ul style="list-style-type: none"> • are to include drop saw, hand saw, radial arm saw, router, stringline, chalk and chalk line, square, notched trowel, moisture meter, straight edge and template • may include plunge saw, jig saw, bench saw, band saw, circular saw, planer and laser level
Materials	<ul style="list-style-type: none"> • may include underlays, adhesives, timber fillers, skirting boards, cover trims and accessories
Adhesives	<ul style="list-style-type: none"> • may include PVAs, epoxys and polyurethane elastamercs

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units	

LMFFL3508A Install mosaic parquet flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to prepare, set out, cut and install mosaic parquet flooring in domestic and commercial sites
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at the trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the installation of mosaic parquetry are verified and complied with</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.3. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.4. Sub-floor condition is assessed for suitability for installation of mosaic parquetry flooring consistent with Australian Standards, industry standards and manufacturer recommendations</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Skirting boards or cover trims are removed or undercut if required and stored for refitting</p> <p>1.7. Sequence of work is planned, including start point, to ensure efficiency and quality of installation</p>
2. Set out mosaic parquetry flooring	<p>2.1. Mosaic parquetry flooring are acclimatised according to manufacturer recommendations</p> <p>2.2. Mosaic parquetry flooring for fixing are organised and used in accordance with relevant safety management requirements</p> <p>2.3. Adhesives and edge strips are prepared for use as required</p> <p>2.4. Area to be covered is measured, working lines and starting point are established</p>
3. Layout and cut parquetry mosaic fingers	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Appropriate underlay is laid according to manufacturers' recommendations</p> <p>3.3. Mosaic parquetry flooring is laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins</p> <p>3.4. The aesthetics of the materials are maximised including matching grains and colours</p> <p>3.5. Parquetry mosaic fingers are accurately and clearly marked for cutting</p>

ELEMENT	PERFORMANCE CRITERIA
	3.6. Parquetry mosaic fingers are cut where required to provide appropriate size and shape ensuring minimum waste
4. Install mosaic parquetry	4.1. Adhesives and edge strips/accessories are prepared for use as required 4.2. Adhesives are used following workplace procedures 4.3. Fixing methods and equipment are used following manufacturer recommendations 4.4. Parquetry is installed and fixed to produce required pattern 4.5. Appropriate field and perimeter expansion joints are allowed 4.6. Skirting boards or cover trims are fitted/re-fitted and finished 4.7. Finished job is inspected and any imperfections are rectified following workplace procedures
5. Complete housekeeping	5.1. Off-cuts or leftover materials are collected and removed following workplace procedures 5.2. Tools and equipment are cleaned, maintained and stored 5.3. Work area is cleaned and waste material is removed and disposed of safely 5.4. Documentation/reporting is completed following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate mosaic parquetry installation problems, avoid re-working and avoid wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - parquetry installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installation of mosaic parquetry including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installation of mosaic parquetry
- organisational and site standards, requirements, policies and procedures for the installation of mosaic parquetry
- types, characteristics, uses and limitations of mosaic parquetry flooring
- types and uses of tools and equipment used during the installation of mosaic parquetry flooring
- types, uses and limitations of adhesives

REQUIRED SKILLS AND KNOWLEDGE

- | |
|--|
| <ul style="list-style-type: none">• workplace safety systems relevant to the installation of mosaic parquetry flooring• work flow in relation to the laying of mosaic parquetry flooring• appropriate mathematical procedures for estimation and measurement• environmental protection requirements• procedures for the recording, reporting and maintenance of workplace records and information. |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing mosaic parquetry flooring
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Establish and maintain appropriate ventilation
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - minimise the risk of injury to self and others
 - achieve a final finish in accordance with Australian Standards and accepted industry practices
- Complete a minimum of two mosaic parquetry floors, which are to include at least:
 - one personally designed pattern
 - one mosaic floor, herringbone pattern with a two mosaic border
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - a realistic mosaic parquetry installation requirement

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to the installation of mosaic parquetry • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting

RANGE STATEMENT	
	and communications <ul style="list-style-type: none"> • Manufacturer instructions for the use of equipment and materials
Sub-floor assessment	<ul style="list-style-type: none"> • is to include testing for moisture content, expansion, rot, structural strength, smoothness and plane
Tools and equipment	<ul style="list-style-type: none"> • are to include radial arm saw, bench saw, stringline, chalk and chalk line, square, notched trowel, moisture meter, straight edge and template • may include plunge saw, drop saw, hand saw, jig saw, band saw, router, circular saw, planer and laser level
Materials	<ul style="list-style-type: none"> • may include underlays, adhesives, timber fillers, skirting boards, cover trims and accessories
Adhesives	<ul style="list-style-type: none"> • may include PVAs, epoxys and polyurethane elastamercs

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units	

LMFFL3509A Install sprung timber flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to install a special purpose sprung platform based timber floor for use in sporting or leisure facilities.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at the trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the installing sprung timber flooring are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Sub-floor condition is assessed for suitability for installation of sprung timber flooring consistent with Australian Standards, industry standards and manufacturer recommendations</p> <p>1.4. Suitable underlays, adhesives, trims and accessories are selected if required</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned to identify the starting point and to ensure efficiency and quality of the work</p>
2. Set out materials	<p>2.1. Timber flooring to be installed is checked against order</p> <p>2.2. Timber flooring is acclimatised according to manufacturer recommendations</p> <p>2.3. Skirting boards or cover trims are removed or undercut if required and stored for refitting or sent for machining</p> <p>2.4. Timber flooring for fixing is organised and used in accordance with relevant safety management requirements</p> <p>2.5. Adhesives and edge strips are prepared for use as required</p> <p>2.6. Area to be covered is measured, working lines and starting point are established</p>
3. Cut timber flooring	<p>3.1. Instructions and sequence for laying and fixing are followed</p> <p>3.2. Underfloor pads are laid according to manufacturers' recommendations</p> <p>3.3. Timber flooring is laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate</p> <p>3.4. The aesthetics of the materials are maximised</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>including matching grains and colours</p> <p>3.5. Timber flooring is accurately and clearly marked for cutting</p> <p>3.6. Timber flooring is cut to length and size for final laying to provide appropriate size and shape ensuring minimum waste</p> <p>3.7. Materials for fixing are organised and used in accordance with relevant safety management requirements</p>
4. Lay flooring	<p>4.1. Instructions and sequence for laying and fixing are followed</p> <p>4.2. Materials for fixing are organised and used in accordance with relevant safety management requirements</p> <p>4.3. Fixing methods and equipment are used following manufacturer recommendations</p> <p>4.4. Appropriate field and perimeter expansion joints are allowed</p> <p>4.5. Skirting boards or cover trims are fitted/re-fitted and finished</p> <p>4.6. Finished job is inspected and any imperfections are rectified following workplace procedures</p>
5. Complete housekeeping	<p>5.1. Unused materials are stored or recycled as required</p> <p>5.2. Tools and equipment are cleaned and stored appropriately</p> <p>5.3. Work area is cleaned and rubbish is disposed of appropriately</p> <p>5.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing sprung timber flooring to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - parquetry installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installing sprung timber flooring including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installation of sprung timber sports flooring
- organisational and site standards, requirements, policies and procedures for the installation of sprung timber sports flooring
- environmental protection requirements
- types and uses of tools and equipment used during the installation of sprung timber sports flooring
- workplace safety system requirements relevant to the installation of sprung timber

REQUIRED SKILLS AND KNOWLEDGE

sports flooring

- work flow in relation to the laying of sprung timber sports flooring
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information
- types, characteristics, uses and limitations of:
 - sprung timber sports flooring
 - installation adhesives
 - underfloor pads
- basic wood working techniques relevant to the installation of sprung timber sports flooring
- characteristics and requirements of sub floor preparation
- work flow in relation to flooring installation operations.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing sprung timber flooring
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of one type of sprung timber sports floor installation
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - a realistic sprung timber floor installation requirement
 - workplace location or simulated workplace
 - materials and equipment relevant to installing sprung timber flooring
 - specifications and work instructions

EVIDENCE GUIDE**Method of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Sprung timber flooring	<ul style="list-style-type: none"> includes strip tongue and groove, parquetry floating floors and manufactured engineered flooring used for indoor sporting applications
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Workplace instructions, instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • are to include PVA, polyurethane elastomeric
Tools and equipment	<ul style="list-style-type: none"> • are to include drop saw, jig saw, hand saw, undercut saw, hammer, bar scriber and utility knife • may include circular saw, bench saw, straight edge, cramps, clamps, staple gun, secret nailer, roller, sanding machines (drum, belt and rotary) and edger
Materials	<ul style="list-style-type: none"> • may include but not be limited to flooring materials, underlay, edge strips, tapes, adhesives, underfloor pads and ventilated skirtings
Underfloor pads	<ul style="list-style-type: none"> • may include rubber or neoprene

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFFL3510A Install strip timber flooring onto battens

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to install tongue and groove strip timber flooring onto battens which may be over joists or a sub-floor to either raise a floor or correct the level of a floor. The activity may include installing the battens
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at the trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational requirements</i> relevant to the installation of <i>strip timber flooring onto battens</i> are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Sub-floor condition is assessed for suitability for installation of strip timber flooring consistent with Australian Standards, industry standards and manufacturer recommendations</p> <p>1.4. Suitable moisture membrane, fixings, <i>adhesives</i>, trims and accessories are selected as required.</p> <p>1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Lay moisture membrane	<p>2.1. Instructions and sequence for laying and fixing are followed</p> <p>2.2. Skirting boards or cover trims are removed or undercut if required and stored for refitting or sent for machining</p> <p>2.3. Moisture proof membrane is fixed following manufacturer recommendations and Australian Standards</p>
3. Cut and fix timber battens	<p>3.1. Timber flooring to be installed is checked against order</p> <p>3.2. Timber flooring is acclimatised according to manufacturer recommendations</p> <p>3.3. Area to be covered is measured, working lines and starting point are established</p> <p>3.4. <i>Timber battens</i> for fixing are organised and used in accordance with relevant safety management requirements</p> <p>3.5. Timber battens are accurately and clearly marked for cutting</p> <p>3.6. Timber battens are cut to length and size for final laying to provide appropriate size and shape ensuring minimum waste</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.7. Fixings are prepared for use as required</p> <p>3.8. Timber battens are fixed using methods and equipment that follows manufacturer recommendations</p>
4. Cut and fix timber flooring	<p>4.1. Instructions and sequence for laying and fixing timber flooring are followed</p> <p>4.2. Work lines and starting point are established</p> <p>4.3. Timber flooring is laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate</p> <p>4.4. The aesthetics of the materials are maximised where appropriate, matching grains and colours</p> <p>4.5. Fixing methods and equipment are used following manufacturer recommendations</p> <p>4.6. Timber flooring is cut to length and size for final laying to provide appropriate size and shape ensuring minimum waste</p>
5. Lay flooring	<p>5.1. Materials for fixing are organised and used in accordance with relevant safety management requirements</p> <p>5.2. Fixing methods and equipment are used following manufacturer recommendations and Australian Standards</p> <p>5.3. Appropriate field and perimeter expansion joints are allowed</p> <p>5.4. Skirting boards or cover trims are fitted and finished</p> <p>5.5. Finished job is inspected and any imperfections are rectified following workplace procedures</p>
6. Complete housekeeping	<p>6.1. Unused materials are stored or recycled as required</p> <p>6.2. Tools and equipment are cleaned and stored appropriately</p> <p>6.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>6.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing strip timber flooring onto battens to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - parquetry installation techniques
- seek learning opportunities
- use the limited workplace technology related to the installing strip timber flooring onto battens, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installation of strip timber flooring
- organisational and site standards, requirements, policies and procedures for the installation of strip timber flooring
- environmental protection requirements
- types, characteristics, uses and limitations of:
 - strip timber flooring installed onto battens
 - installation adhesives

REQUIRED SKILLS AND KNOWLEDGE

- timber battens
- types and uses of tools and equipment used during the installation of strip timber flooring
- basic wood working techniques relevant to the installation of timber strip flooring installed onto to battens
- workplace safety system requirements relevant to the installation of strip timber flooring installed onto battens
- work flow in relation to the laying of strip timber flooring onto battens operations
- characteristics and requirements of sub-floor preparation
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing strip timber flooring on battens
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of one installation of strip timber flooring onto battens
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - a realistic strip timber floor installation requirement
 - workplace location or simulated workplace
 - materials and equipment relevant to installing strip timber flooring

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling, including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Strip timber flooring onto battens	<ul style="list-style-type: none"> includes strip tongue and groove floating floors and manufactured engineered flooring used for indoor sporting applications
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Workplace instructions, instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • are to include PVA, polyurethane elastomeric
Tools and equipment	<ul style="list-style-type: none"> • are to include drop saw, jig saw, hand saw, undercut saw, hammer, bar scriber and utility knife • may include circular saw, bench saw, straight edge, cramps, clamps, staple gun, secret nailer, roller, sanding machines (drum, belt and rotary) and edger
Materials	<ul style="list-style-type: none"> • may include but not be limited to flooring materials, timber battens, edge strips, tapes, adhesives, metal fixings, ventilated skirtings
Timber battens	<ul style="list-style-type: none"> • may include timber battens with a density less than or equal to 600Kg/m³, greater than 600Kg/m³

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFFL3511A Install strip timber flooring onto plywood

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to install tongue and groove strip timber flooring onto plywood which may be over joists, concrete or a sub-floor to either raise a floor or correct the level of a floor. The activity may include installing the plywood.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at the trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the installation of strip timber flooring onto plywood are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Sub-floor condition is assessed for suitability for installation of strip timber flooring consistent with Australian Standards, industry standards and manufacturer recommendations</p> <p>1.4. Suitable moisture membrane, fixings, adhesives, trims and accessories are selected as required.</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Lay moisture membrane	<p>2.1. Instructions and sequence for laying and fixing are followed</p> <p>2.2. Skirting boards or cover trims are removed or undercut if required and stored for refitting or sent for machining</p> <p>2.3. Moisture proof membrane is fixed following manufacturer recommendations and Australian Standards</p>
3. Cut and fix plywood underlay	<p>3.1. Timber flooring to be installed is checked against order</p> <p>3.2. Timber flooring is acclimatised according to manufacturer recommendations</p> <p>3.3. Area to be covered is measured, working lines and starting point are established</p> <p>3.4. Plywood underlay for fixing is organised and used in accordance with relevant safety management requirements</p> <p>3.5. Plywood underlay is accurately and clearly marked for cutting</p> <p>3.6. Plywood underlay is cut to length and size for final laying to provide appropriate size and shape ensuring minimum waste</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.7. Fixings are prepared for use as required</p> <p>3.8. Plywood underlay is fixed using methods and equipment that follows manufacturers' recommendations</p>
4. Cut and fix timber flooring	<p>4.1. Instructions and sequence for laying and fixing timber flooring are followed</p> <p>4.2. Work lines and starting point are established</p> <p>4.3. Timber flooring is laid out to meet directional sequence, pattern match, specification requirements and to minimise waste and joins as appropriate</p> <p>4.4. The aesthetics of the materials are maximised where appropriate, matching grains and colours</p> <p>4.5. Fixing methods and equipment are used following manufacturer recommendations</p> <p>4.6. Timber flooring is cut to length and size for final laying to provide appropriate size and shape ensuring minimum waste</p>
5. Lay flooring	<p>5.1. Materials for fixing are organised and used in accordance with relevant safety management requirements</p> <p>5.2. Fixing methods and equipment are used following manufacturer recommendations and Australian Standards</p> <p>5.3. Appropriate field and perimeter expansion joints are allowed</p> <p>5.4. Skirting boards or cover trims are fitted and finished</p> <p>5.5. Finished job is inspected and any imperfections are rectified following workplace procedures</p>
6. Complete housekeeping	<p>6.1. Unused materials are stored or recycled as required</p> <p>6.2. Tools and equipment are cleaned and stored appropriately</p> <p>6.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>6.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems installing strip timber flooring onto plywood underlay to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - strip timber flooring installation techniques onto plywood underlay
- seek learning opportunities
- use the limited workplace technology related to installing strip timber flooring onto plywood underlay, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to installation of strip timber flooring
- organisational and site standards, requirements, policies and procedures for the installation of strip timber flooring on plywood underlay
- type, characteristics, uses and limitations of:
 - strip timber flooring installed onto plywood underlay
 - installation adhesives
 - plywood underlay

REQUIRED SKILLS AND KNOWLEDGE

- types and uses of tools and equipment used during the installation of strip timber flooring on the plywood underlay
- basic wood working techniques relevant to the installation of timber strip flooring installed onto to plywood underlay
- workplace safety system requirements relevant to the installation of strip timber flooring installed onto plywood underlay
- work flow in relation to the laying of strip timber flooring onto plywood underlay operations
- characteristics and requirements of sub-floor preparation
- environmental protection requirements
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for installing strip timber flooring on plywood
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Complete a minimum of one installation of strip timber flooring onto plywood underlay fixed to a concrete sub-floor
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - a realistic strip timber floor installation requirement
 - workplace location or simulated workplace
 - materials and equipment relevant to installing

EVIDENCE GUIDE	
	<p>strip timber flooring</p> <ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Strip timber flooring onto plywood underlay	<ul style="list-style-type: none"> includes tongue and groove strip timber flooring onto plywood underlay which may be over joists, concrete or a sub-floor to either raise a floor or correct the level of a floor.

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Adhesives	<ul style="list-style-type: none"> • may include PVA, polyurethane, elastomeric
Tools and equipment	<ul style="list-style-type: none"> • are to include drop saw, jig saw, hand saw, undercut saw, hammer. • may include circular saw, bench saw, straight edge, cramps, clamps, staple gun, secret nailer bar scribe and utility knife.
Materials	<ul style="list-style-type: none"> • may include but not be limited to flooring materials, strip timber floor boards, plywood underlay, edge strips, timber and metal mouldings, tapes, adhesives, metal fixings, ventilated skirtings
Plywood underlay	<ul style="list-style-type: none"> • may include timber plywood underlay manufactured under a JAS-ANZ accredited product certification scheme meeting the internationally recognised ISO Type 5 system for product reliability to AS/NZS 2269

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units		

LMFFL3512A Repair timber flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to neatly remove existing defective floor components which may have cracked, split or have been defaced or damaged and replace the defective component with a matching piece.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at the trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the installing repairing timber flooring are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Work instructions or customer feedback are used to identify required work</p> <p>1.4. Damaged floor is inspected to determine probable causes of damage or faults and assist in the repair planning process</p> <p>1.5. Damage assessment and work plan are used to select required materials</p> <p>1.6. Timber materials are matched to existing materials</p> <p>1.7. Quantities of replacement flooring and materials required are confirmed from the work plan</p> <p>1.8. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.9. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p> <p>1.10. Sequence of work is planned to identify the starting point and to ensure efficiency and quality of the work</p>
2. Set out materials	<p>2.1. Timber flooring to be installed is checked against order</p> <p>2.2. Timber flooring to be installed is acclimatised according to manufacturer recommendations</p> <p>2.3. Area to be repaired is measured and starting points are marked</p> <p>2.4. Damaged sections of floor are removed and/or prepared for repair following workplace procedures</p> <p>2.5. Suitable adhesives/fasteners, fillers and/or stains are selected following workplace procedures or work instructions</p>
3. Repair flooring	<p>3.1. Replacement flooring materials are cut to provide appropriate alignment of joints</p> <p>3.2. Adhesives/fasteners are used following workplace procedures</p> <p>3.3. Replacement flooring materials are installed to</p>

ELEMENT	PERFORMANCE CRITERIA
	produce required finish 3.4. Damaged areas are filled and/or re-stained to complete repair following workplace procedures
4. Complete housekeeping	4.1. Off-cuts or leftover materials are collected and removed following workplace procedures 4.2. Tools and equipment are cleaned, maintained and stored 4.3. Work area is cleaned and waste material is removed and disposed of safely 4.4. Documentation/reporting is completed following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems repairing timber flooring to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - parquetry installation techniques
- seek learning opportunities
- use the limited workplace technology related to the repairing timber, parquetry and cork flooring, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to repairing timber flooring
- organisational and site standards, requirements, policies and procedures for the repairing of timber flooring
- environmental protection requirements
- types, characteristics, uses and limitations of timber floors
- types and uses of tools and equipment used during the installation of timber flooring

REQUIRED SKILLS AND KNOWLEDGE

- workplace safety system requirements relevant to the installation of timber flooring
- work flow in relation to the laying of timber flooring
- causes of imperfections and damage to timber flooring
- characteristics of timber and concrete sub-floors
- requirements of sub-floor ventilation
- techniques and requirements for conducting moisture testing
- workplace system requirements relating to inspecting and repairing timber flooring materials
- work flow in relation to the repair of timber flooring materials
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for repairing timber flooring
 - Interpret work order and locate and apply relevant information
 - Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
 - Apply ventilation standards
 - Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
 - Complete a minimum of two types of repair involving removing and replacing:
 - strip timber flooring
 - parquetry flooring and/or
 - floating flooring
 - Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - a realistic sprung timber floor installation requirement

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to repairing timber floors • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Repair timber flooring	<ul style="list-style-type: none"> includes repairs required to remove existing defective floor components which may have cracked, split or have been defaced or damaged and replace the defective component with a matching piece. It includes timber

RANGE STATEMENT	
	floors, timber parquetry, floating floors and cork floor coverings.
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Inspected	<ul style="list-style-type: none"> • To determine probable causes of damage or fault so that the correct remedial action can be undertaken and prevent further damage to repaired floor. This includes checking sub-floor ventilation, moisture, rot, insects, structural faults and/or fire damage. Following inspection damage is assessed and a repair plan is formulated. Cause of damage is reported to the client in accordance with Australian Standards.
Tools and equipment	<ul style="list-style-type: none"> • are to include drop saw, jig saw, hand saw, nail gun, moisture meter, glue gun, belt sander, drum sander, edge sander, rotary sander, hammer and chisels, planer, circular saw, combination saw
Materials	<ul style="list-style-type: none"> • may include but not be limited to flooring materials, underlay, edge strips, tapes, adhesives, underfloor pads and ventilated skirtings
Matched	<ul style="list-style-type: none"> • refers to the matching of timber product in terms of grade, colour and texture

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber
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Co-requisite units

Co-requisite units		

LMFFL3513A Maintain timber, laminate and engineered flooring

Modification History

Not applicable.

Unit Descriptor

<p>Unit descriptor</p>	<p>This unit specifies the outcomes required to prepare and implement maintenance systems to maintain timber, laminate and engineered flooring. It requires the application of skills and knowledge to develop and implement a maintenance plan which is cost efficient, environmentally sensitive and specific to floor type and location.</p> <p>The required outcomes specified in this unit of competency contain applicable facets of employability skills. These are listed under <i>Required Skills</i> and further summarised in the Qualifications Employability Skills Summary in the Training Package.</p>
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Application of the Unit

<p>Application of the unit</p>	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the person's job and authority.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare maintenance plan	<p>1.1. Applicable legislative, OH&S and organisational requirements relevant to flooring maintenance requirements are verified and complied with</p> <p>1.2. Instructions or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Maintenance requirements for timber, laminate and engineered flooring are identified from relevant information sources</p> <p>1.4. Maintenance costs are identified and quantified</p> <p>1.5. Maintenance requirements are checked against warranty, insurance agreements and indemnity provisions</p> <p>1.6. Maintenance plan is developed to promote and sustain performance and production systems in line with enterprise requirements</p> <p>1.7. Effective workplace communication strategies are established with regard to maintenance plan, environmental and OHS policies, and enterprise requirements</p>
2. Implement maintenance plan	<p>2.1. Tools, equipment and materials are selected and checked prior to use</p> <p>2.2. Resource and supply requirements are identified, secured and included in enterprise budgets and operational considerations</p> <p>2.3. Prepared maintenance schedules and procedures are effectively communicated to customers, staff, contractors and suppliers to minimise negative impacts on maintenance systems and costs</p> <p>2.4. Maintenance plans and work sequences are implemented and scheduled to minimise disruption to customers operations</p> <p>2.5. Potential risks/hazards are assessed with regard to staff and supply problems, and contingency plans prepared accordingly</p> <p>2.6. Timber laminate and engineered flooring are maintained to manufacturer's specifications, OHS and enterprise requirements</p>
3. Monitor maintenance plan	<p>3.1. Maintenance activities and performance are monitored against maintenance plan for efficiency and effectiveness</p> <p>3.2. Workplace hazards and environmental implications</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>associated with maintenance procedures are monitored and controlled in line with OHS and customers requirements</p> <p>3.3. Costs are monitored and controlled within maintenance system budget requirements</p> <p>3.4. Relevant information with regard to the maintenance plan is documented in accordance with customer requirements</p> <p>3.5. Timber, laminate and engineered flooring are maintained in clean and safe operational condition</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, maintenance plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate coating problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the planning and implementing maintenance systems and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate coating material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of maintenance techniques
- seek learning opportunities
- use the workplace technology related to the maintenance activities and performance including tools, equipment, calculators and measuring devices
- interpret the technical specifications of materials and analyse their properties to optimise their use

Required knowledge

- State or Territory OH&S legislation, regulations, standards and codes of practice relevant to the preparation and implementation of maintenance systems
- organisational and site standards, requirements, policies and procedures for the preparation and implementation of maintenance systems for timber, laminate and engineered flooring
- the methods of the preparation and implementation of maintenance systems for timber, laminate and engineered flooring
- characteristics of maintenance systems for timber, laminate and engineered

REQUIRED SKILLS AND KNOWLEDGE

flooring in relation to ventilation, moisture content of timber, timber species and reaction to change of temperature and relative humidity

- the type, characteristics, uses and limitation of maintenance systems for timber, laminate and engineered flooring including manufacturers' recommendations
- the types and uses of tools and equipment maintaining timber, laminate and engineered flooring
- workplace safety systems related to processes for maintaining timber, laminate and engineered flooring
- work flow in relation to planning and implementing maintenance systems for timber, laminate and engineered flooring.
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- mathematical techniques may be applied to estimate and calculate maintenance and repair costings within budgetary guidelines
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for applying finishes to strip timber and parquetry flooring
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Establish and maintain appropriate ventilation
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - minimise the risk of injury to self and others
 - achieve a final finish in accordance with Australian Standards and accepted industry practices
- Prepare and implement maintenance system for one
 - strip timber floor
 - parquetry flooring
 - cork flooring
 - laminate floating flooring
 - pre-finished engineered flooring
- Identify faults/problems and identify and carry out corrective action
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be

EVIDENCE GUIDE	
	<p>conducted in an off-site context</p> <ul style="list-style-type: none"> • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • a realistic maintenance requirement • materials and equipment relevant to maintaining timber, laminate and engineered flooring • specifications and work instructions for maintenance systems
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OH&S, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OH&S, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> workplace procedures relating to the use and operation of tools and equipment workplace instructions, including job sheets, plans, drawings and designs workplace procedures relating to reporting and communications manufacturers' recommendations for the use of equipment and materials
Maintenance requirements	<ul style="list-style-type: none"> may include those related to wear, corrosion, design problems, equipment modifications, incorrect use and accidents, acts of nature
Information sources	<ul style="list-style-type: none"> may include operational diaries, manufactures in-service updates, operator manuals, environmental conditions, staff comment and/or personal testing, observation of

RANGE STATEMENT	
	structures, property improvement groups, relevant government departments, other enterprise operators, contractors and service representatives
Maintenance plan	<ul style="list-style-type: none"> is to cover relevant aspects of maintenance activities and schedules, maintenance costs and budget details, staff, resources and supply requirements, roles and responsibilities, contingency plan for staff and supply problems, reporting requirements, hazard and risk control measures, OHS procedures, personal protective clothing and equipment requirements, and environmental impact control measures
Enterprise requirements.	<ul style="list-style-type: none"> may include Standard Operating Procedures (SOP), industry standards, production schedules, Material Safety Data Sheets (MSDS), legislative and licensing requirements, work notes, product labels, manufacturers specifications, operator's manuals, enterprise policies and procedures (including waste disposal, recycling and re-use guidelines), and OHS procedures
Environmental policies	<ul style="list-style-type: none"> may include environmental impacts resulting from emissions, the unsafe use and disposal of maintenance debris (chemical residues), and hazardous substances (cleaning solvents). It may also include dust problems and unsafe cleaning and servicing activities
Tools and equipment	<ul style="list-style-type: none"> may include brooms, brushes, vacuum cleaner, mops, mop buckets, squeeze mops, dust mops, scissor mops, buffing pads, paint brushes, polimate and wool applicators, rotary brushes, scouring pads, paint rollers and roller tray
Work sequence	<ul style="list-style-type: none"> is to include preparation, inspection, coating application(s) and intermediate steps, finalisation and acceptance inspection
Risks/hazards	<ul style="list-style-type: none"> may include dust, mechanical vibration, hazardous substances (cleaning solvents), hazardous atmosphere, the presence of bystanders, adverse weather conditions, electricity, powerlines, mechanical malfunctions and other machinery including

RANGE STATEMENT	
	hydraulics and exposed moving parts
Resource and supply	<ul style="list-style-type: none"> may include metallised polish, wax emulations, furniture protection felt pads, barrier mats, window coverings, wood floor cleaner, antistatic mop, vacuum cleaner, damp mop
Relevant information	<ul style="list-style-type: none"> may include maintenance performance, costs, problems, priorities, solutions, schedules, and completed work

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFL3601A Fine sand timber flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to fine sand existing floors either after a coarse sand, or where only minor rectification of scratches or wear and tear has occurred or between coats. This process usually involves a rotary sanding machine.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for the work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to fine sanding timber flooring are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Timber flooring is inspected for contamination, moisture content and suitability for fine sanding operations and any pre-sanding tasks are completed</p> <p>1.4. Timber flooring condition is assessed and the extent of fine sanding required to meet job specifications is confirmed</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. The job site is isolated and/or encapsulated to contain dust fallout from sanding operation</p> <p>1.7. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Conduct finish sanding operations	<p>2.1. Sanding equipment is set up in accordance with manufacturer instructions and operating procedures</p> <p>2.2. Emergency stops, gauges, guards and controls are identified and checked</p> <p>2.3. Equipment settings and adjustments are made and checked</p> <p>2.4. Sanding belts or papers are selected</p> <p>2.5. Trial runs are conducted to check machine operations and quality of finished work</p> <p>2.6. Sanding belts or papers are attached, routinely checked and changed as required</p> <p>2.7. Sanding is completed systematically and effectively within the minimum required timeframe</p> <p>2.8. Routine lubrication and adjustments to the equipment are completed as required</p> <p>2.9. Finished timber flooring is cleaned, inspected and any imperfections are rectified following workplace procedures</p>
3. Conduct edge sanding operations	<p>3.1. Edge sanding equipment is set up in accordance with manufacturer instructions and operating procedures</p> <p>3.2. Emergency stops, gauges, guards and controls are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>identified and checked</p> <p>3.3. Equipment settings and adjustments are made and checked</p> <p>3.4. Sanding papers are selected</p> <p>3.5. Trial runs are conducted to check machine operations and quality of finished work</p> <p>3.6. Sanding papers are attached, routinely checked and changed as required</p> <p>3.7. Edge sanding is completed systematically and effectively within the minimum required timeframe</p> <p>3.8. Routine lubrication and adjustments to the equipment are completed as required</p> <p>3.9. Finished timber flooring is cleaned, inspected and any imperfections are rectified following workplace procedures</p>
<p>4. Conduct <i>fine sanding</i> operations</p>	<p>4.1. Fine sanding equipment is set up in accordance with manufacturer instructions and operating procedures</p> <p>4.2. Emergency stops, gauges, guards and controls are identified and checked</p> <p>4.3. Equipment settings and adjustments are made and checked</p> <p>4.4. Sanding papers are selected</p> <p>4.5. Trial runs are conducted to check machine operations and quality of finished work</p> <p>4.6. Sanding papers are attached, routinely checked and changed as required</p> <p>4.7. Fine sanding is completed systematically and effectively within the minimum required timeframe</p> <p>4.8. Finished timber flooring is cleaned, inspected and any imperfections are rectified following workplace procedures</p>
<p>5. Complete housekeeping</p>	<p>5.1. Unused materials are stored or recycled as required</p> <p>5.2. Tools and equipment are cleaned and stored appropriately</p> <p>5.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>5.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems fine sanding timber floors to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the fine sanding of timber floors, including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to moisture suppressants and barrier systems fine sanding timber flooring
- organisational and site standards, requirements, policies and procedures for fine sand timber flooring
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

- maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- characteristics and requirements of timber flooring fine sanding
- type, characteristics, uses and limitations of fine sanding timber flooring
- types and uses of relevant tools and equipment used to conduct fine sanding operations
- workplace safety system requirements related to fine sanding timber flooring.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for fine sanding of timber floors
- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Prepare three different types of timber floors from the following list:
 - strip
 - parquetry
 - cork
 - floating floor
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to fine sanding of timber floors

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Fine sanding

- includes fine sanding existing timber floors either after a coarse sand, or where only minor rectification of scratches or wear and tear has occurred or between coats

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Pre-sanding tasks	<ul style="list-style-type: none"> • may include isolating and/or encapsulating the job site, nail punching, filling, scraping, sweeping, vacuuming, cleaning and removal of all foreign objects such as nails, tacks, staples, etc
Tools and equipment	<ul style="list-style-type: none"> • are to include hammers, scrapers, nail punches, brooms and vacuums
Materials	<ul style="list-style-type: none"> • are to include but are not limited to sanding belts, sanding paper, discs, oil and lubricants and cleaning materials
Finish sanding	<ul style="list-style-type: none"> • is to include split drum and belt floor sanding machines using 60 - 100 grit papers
Sanding equipment	<ul style="list-style-type: none"> • is to include drum/belt sander, random orbital, rotary and edger sanders and may include a finishing machine
Edge sanding	<ul style="list-style-type: none"> • is to include edge sanding machines both rotary and orbital using the full range of grit papers depending on the general floor sanding process in train
Fine sanding	<ul style="list-style-type: none"> • is to include rotary and orbital floor sanding machines using 100 - 200 grit paper

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber / Sanding and Finishing
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Co-requisite units

Co-requisite units	

LMFFL3602A Edge sand timber flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to edge sand existing floors using a disc, orbital or belt sander to grade the surface and remove cupping, ridges, high points or deep scratches along the edges of the room, in corners or areas of reduced access such as wardrobes etc. The pattern of sanding should overlap and blend the floor boards into the body of the sanded floor.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a sub-trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for the work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to edge sanding of timber flooring are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Timber flooring is checked for contamination and moisture content</p> <p>1.4. Timber flooring condition is assessed and the extent of floor preparation required to meet job specifications is confirmed</p> <p>1.5. Timber flooring is inspected for suitability for sanding operations and any pre-sanding tasks are completed</p> <p>1.6. Mechanical fixings are removed avoiding damage to equipment and surfaces</p> <p>1.7. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.8. The job site is isolated and/or encapsulated to contain dust fallout from sanding operation</p> <p>1.9. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Edge sanding operations	<p>2.1. Edge sanding equipment is set up in accordance with manufacturer instructions and operating procedures</p> <p>2.2. Emergency stops, gauges, guards and controls are identified and checked</p> <p>2.3. Equipment settings and adjustments are made and checked</p> <p>2.4. Sanding papers are selected</p> <p>2.5. Trial runs are conducted to check machine operations and quality of finished work</p> <p>2.6. Sanding papers are attached, routinely checked and changed as required</p> <p>2.7. Edge sanding is completed systematically and effectively within the minimum required timeframe</p> <p>2.8. Routine lubrication and adjustments to the equipment are completed as required</p> <p>2.9. Finished timber flooring is cleaned, inspected and</p>

ELEMENT	PERFORMANCE CRITERIA
	any imperfections are rectified following workplace procedures
3. Complete housekeeping	3.1. Unused materials are stored or recycled as required 3.2. Tools and equipment are cleaned and stored appropriately 3.3. Work area is cleaned and rubbish disposed of appropriately 3.4. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems related to edge sanding of timber floors to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - edge sanding techniques
- seek learning opportunities
- use the limited workplace technology related to the edge sanding of timber floors including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to edge sand timber flooring
- organisational and site standards, requirements, policies and procedures for edge sanding of timber flooring
- characteristics, requirements and techniques for timber flooring edge sanding
- types and uses of relevant tools and equipment used to conduct edge sanding operations
- workplace safety system requirements related to edge sanding timber flooring

REQUIRED SKILLS AND KNOWLEDGE

- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for edge sanding timber floors
- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Complete a minimum of two timber flooring preparations requiring edge sanding timber flooring:
 - to grade the surface
 - to remove cupping, ridges, high points or deep scratches along the edges of the room, in corners or areas of reduced access such as wardrobes etc.
 - to blend the floor boards into the body of course and fine sanded timber floor
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to edge sanding

EVIDENCE GUIDE	
	<p>timber floors</p> <ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Edge sanding of timber flooring	<ul style="list-style-type: none"> is to include removal of mechanical fixings, punching of nails, sanding the timber flooring to grade the surface to remove cupping, ridges, high points or deep scratches along the edges of the room, in corners or areas of

RANGE STATEMENT	
	reduced access such as wardrobes etc. The pattern of sanding should overlap and blend the floor boards into the body of the sanded floor
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Mechanical fixings	<ul style="list-style-type: none"> • are to include tacks, nails, staples and screws
Tools and equipment	<ul style="list-style-type: none"> • are to include hammer, scrapers, punches, brooms, vacuums, leads and dust masks
Materials	<ul style="list-style-type: none"> • are to include but are not limited to sanding belts, sanding paper, sanding discs, oil and lubricants
Edge sanding equipment	<ul style="list-style-type: none"> • may include disc, orbital or belt sanders, using a full range of grit papers depending on the sanding process required, oil and lubricants

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Floor Preparation
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Co-requisite units

Co-requisite units		

LMFFL3603A Sand cork flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to sand cork floors either new cork flooring or re-sanding existing cork flooring, where only minor rectification of scratches or wear and tear has occurred or between coats. This process usually involves a floor sanding machine, rotary or orbital sanding machine and edge sanding machine.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for the work	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to sanding cork flooring are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Cork flooring is inspected for contamination, moisture content and suitability for fine sanding operations and any pre-sanding tasks are completed</p> <p>1.4. Cork flooring condition is assessed and the extent of fine sanding required to meet job specifications is confirmed</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. The job site is isolated and/or encapsulated to contain dust fallout from sanding operation</p> <p>1.7. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Conduct finish sanding operations	<p>2.1. Finishing sanding equipment including split drum/belt sanding equipment is set up in accordance with manufacturer instructions and operating procedures</p> <p>2.2. Emergency stops, gauges, guards and controls are identified and checked</p> <p>2.3. Equipment settings and adjustments are made and checked</p> <p>2.4. Sanding papers are selected</p> <p>2.5. Trial runs are conducted to check machine operations and quality of finished work</p> <p>2.6. Sanding papers are attached, routinely checked and changed as required</p> <p>2.7. Sanding is completed systematically and effectively within the minimum required timeframe</p> <p>2.8. Routine lubrication and adjustments to the equipment are completed as required</p> <p>2.9. Finish sanded cork flooring is cleaned, inspected and any imperfections are rectified following workplace procedures</p>
3. Conduct fine	3.1. Rotary/orbital sanding equipment is set up in

ELEMENT	PERFORMANCE CRITERIA
<i>sanding</i> operations	<p>accordance with manufacturer instructions and operating procedures</p> <p>3.2. Emergency stops, gauges, guards and controls are identified and checked</p> <p>3.3. Equipment settings and adjustments are made and checked</p> <p>3.4. Sanding papers are selected</p> <p>3.5. Trial runs are conducted to check machine operations and quality of finished work</p> <p>3.6. Sanding papers are attached, routinely checked and changed as required</p> <p>3.7. Cork sanding is completed systematically and effectively within the minimum required timeframe</p> <p>3.8. Fine sanded cork flooring is cleaned, inspected and any imperfections are rectified following workplace procedures</p>
4. Conduct <i>edge sanding</i> operations	<p>4.1. Edge sanding equipment is set up in accordance with manufacturer instructions and operating procedures</p> <p>4.2. Emergency stops, gauges, guards and controls are identified and checked</p> <p>4.3. Equipment settings and adjustments are made and checked</p> <p>4.4. Sanding papers are selected</p> <p>4.5. Trial runs are conducted to check machine operations and quality of finished work</p> <p>4.6. Sanding papers are attached, routinely checked and changed as required</p> <p>4.7. The edge and difficult to get to areas are sanded and completed systematically to blend into the body of the sanded cork floor.</p> <p>4.8. Routine lubrication and adjustments to the equipment are completed as required</p> <p>4.9. Finished cork flooring is cleaned, inspected and any imperfections are rectified following workplace procedures</p>
5. Complete housekeeping	<p>5.1. Unused materials are stored or recycled as required</p> <p>5.2. Tools and equipment are cleaned and stored appropriately</p> <p>5.3. Work area is cleaned and rubbish disposed of appropriately</p> <p>5.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems sanding cork floors to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- seek learning opportunities
- use the limited workplace technology related to the sanding of cork floors including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to moisture suppressants and barrier systems sanding cork flooring
- organisational and site standards, requirements, policies and procedures for sanding cork flooring
- characteristics of materials, products and defects
- set up and operation of sanding equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and

REQUIRED SKILLS AND KNOWLEDGE

information

- appropriate mathematical procedures for estimation and measurement
- characteristics and requirements of sanding cork flooring
- type, characteristics, uses and limitations of sanding cork flooring
- types and uses of relevant tools and equipment used to conduct fine sanding operations
- workplace safety system requirements related to sanding cork flooring
- types of tools and equipment and procedures for their safe use, operation and maintenance
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for fine sanding of cork floors
- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Sand three different types of cork floors from the following list:
 - cork tiles
 - cork planks
 - pattered cork tiles (bevelled edge)
 - stained cork tiles
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to sanding of cork floors

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Sanding

- includes sanding new or existing cork floors either after a finish sand, or where only minor rectification of scratches or wear and tear has occurred or between coats

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Pre-sanding tasks	<ul style="list-style-type: none"> • may include isolating and/or encapsulating the job site, nail punching, filling, scraping, sweeping, vacuuming, cleaning and removal of all foreign objects such as nails, tacks, staples, etc
Tools and equipment	<ul style="list-style-type: none"> • are to include hammers, scrapers, nail punches, brooms and vacuums
Materials	<ul style="list-style-type: none"> • are to include but are not limited to sanding belts, sanding paper, discs, oil and lubricants and cleaning materials
Finish sanding	<ul style="list-style-type: none"> • is to include split drum and belt floor sanding machines using 60 - 100 grit papers
Finishing sanding equipment	<ul style="list-style-type: none"> • is to include drum/belt sander, random orbital, rotary and edger sanders and may include a finishing machine
Fine sanding	<ul style="list-style-type: none"> • is to include rotary and orbital floor sanding machines using 100 - 200 grit paper
Edge sanding	<ul style="list-style-type: none"> • is to include edge sanding machines both rotary and orbital using the full range of grit papers depending on the general floor sanding process in train

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber / Sanding and Finishing
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Co-requisite units

Co-requisite units	

LMFFL3604A Sand and fill parquetry flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to course, finish and fine sand and fill parquetry floors in preparation to apply coating or recoat the flooring. This process may involve the use of a split drum/belt floor sander, rotary or orbital sanding machines and an edge sanding machine.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for the work	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to <i>coarse, finish and fine sanding and filling</i> parquetry flooring are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Parquetry flooring is inspected for contamination, moisture content and suitability for coarse, finish and fine sanding operations and any <i>pre-sanding tasks</i> are completed</p> <p>1.4. Parquetry flooring condition is assessed and the extent of coarse, finish and fine sanding and filling required to meet job specifications is confirmed</p> <p>1.5. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. The job site is isolated and/or encapsulated to contain dust fallout from sanding operation</p> <p>1.7. Sequence of work is planned, including the starting point, to ensure efficiency and quality of installation</p>
2. Conduct coarse sanding operations	<p>2.1. <i>Sanding equipment</i> is set up in accordance with manufacturer instructions and operating procedures</p> <p>2.2. Emergency stops, gauges, guards and controls are identified and checked</p> <p>2.3. Equipment settings and adjustments are made and checked</p> <p>2.4. Sanding belts or papers are selected</p> <p>2.5. Trial runs are conducted to check machine operations and quality of finished work</p> <p>2.6. Sanding belts or papers are attached, routinely checked and changed as required</p> <p>2.7. Coarse sanding is completed systematically and effectively with the grain, against the grain and across the grain within the minimum required timeframe</p> <p>2.8. Routine lubrication and adjustments to the equipment are completed as required</p> <p>2.9. Coarse sanded parquetry flooring is cleaned, inspected and any imperfections are rectified following workplace procedures</p>

ELEMENT	PERFORMANCE CRITERIA
3. Conduct <i>edge sanding</i> operations	<p>3.1. Edge sanding equipment is set up in accordance with manufacturer instructions and operating procedures</p> <p>3.2. Emergency stops, gauges, guards and controls are identified and checked</p> <p>3.3. Equipment settings and adjustments are made and checked</p> <p>3.4. Sanding papers are selected</p> <p>3.5. Trial runs are conducted to check machine operations and quality of finished work</p> <p>3.6. Sanding papers are attached, routinely checked and changed as required</p> <p>3.7. Edge sanding is completed systematically and effectively within the minimum required timeframe</p> <p>3.8. Routine lubrication and adjustments to the equipment are completed as required</p> <p>3.9. Edge sanded parquetry flooring is cleaned, inspected and any imperfections are rectified following workplace procedures</p>
4. Conduct <i>finish sanding</i> operations	<p>4.1. Finish sanding equipment is set up in accordance with manufacturer instructions and operating procedures</p> <p>4.2. Emergency stops, gauges, guards and controls are identified and checked</p> <p>4.3. Equipment settings and adjustments are made and checked</p> <p>4.4. Sanding papers are selected</p> <p>4.5. Trial runs are conducted to check machine operations and quality of finished work</p> <p>4.6. Sanding papers are attached, routinely checked and changed as required</p> <p>4.7. Finish sanding of the body and perimeter of the floor is completed systematically and effectively within the minimum required timeframe</p> <p>4.8. Fine sanded parquetry flooring is cleaned, inspected and any imperfections are rectified following workplace procedures</p>
5. Conduct filling operations	<p>5.1. <i>Surface to be filled</i> is <i>inspected</i> and assessed as being ready for filling with the selected filler</p> <p>5.2. <i>Work sequence</i> is planned to ensure efficiency and quality of application</p> <p>5.3. Ventilation is checked before chemical fumes are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>released, and all OHS requirements are met including use of personal protective equipment</p> <p>5.4. Environmental protection regulations are complied with</p> <p>5.5. Filling material is prepared as per manufacturer specifications.</p> <p>5.6. Trial applications of fillers are made to check equipment operation, materials consistency, viscosity and specified colour</p> <p>5.7. Faults and or inconsistencies in colour are identified and workplace procedures for rectification and adjustment are followed</p> <p>5.8. Filling material is applied in accordance with manufacturer recommendations</p> <p>5.9. Recommended drying times are observed before fine sanding</p> <p>5.10. Sanding between coats, where required, is carried out according to manufacturer recommendations</p> <p>5.11. Finished floors are inspected and approved for suitability for further processing</p> <p>5.12. Final finish meets the requirements of the job</p>
6. Conduct fine sanding operations	<p>6.1. Fine sanding equipment is set up in accordance with manufacturer instructions and operating procedures</p> <p>6.2. Emergency stops, gauges, guards and controls are identified and checked</p> <p>6.3. Equipment settings and adjustments are made and checked</p> <p>6.4. Sanding papers are selected</p> <p>6.5. Trial runs are conducted to check machine operations and quality of finished work</p> <p>6.6. Sanding papers are attached, routinely checked and changed as required</p> <p>6.7. Fine sanding of the body and perimeter of the floor is completed systematically and effectively within the minimum required timeframe</p> <p>6.8. Fine sanded parquet flooring is cleaned, inspected and any imperfections are rectified following workplace procedures</p>
7. Complete	7.1. Unused materials are stored or recycled as required

ELEMENT	PERFORMANCE CRITERIA
housekeeping	7.2. Tools and equipment are cleaned and stored appropriately 7.3. Work area is cleaned and rubbish disposed of appropriately 7.4. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems when coarse, finish, fine sanding and filling parquetry floors to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - installation techniques
- Seek learning opportunities
- Use the limited workplace technology related to the coarse, finish, fine sanding and filling of parquetry floors including tools, equipment, calculators and measuring devices.

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to fine sanding parquetry flooring
- organisational and site standards, requirements, policies and procedures for coarse, finish and fine sanding and filling parquetry flooring
- characteristics, requirements and techniques for coarse, finish, fine sanding and filling parquetry flooring
- types and uses of relevant tools and equipment used to conduct coarse, finish and

REQUIRED SKILLS AND KNOWLEDGE

- fine sanding and filling operations
- workplace safety system requirements related to coarse, finish and fine sanding and filling parquetry flooring
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- set up and operation of equipment
- products assembly techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for fine sanding of parquetry floors
- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Prepare two different types of parquetry floors from the following list:
 - block (mandatory) and
 - mosaic or multi-directional patterned
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to fine sanding of parquetry floors
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment

EVIDENCE GUIDE

guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Fine sanding

- includes fine sanding existing parquet floors either after a finish sand, or where only minor rectification of scratches or wear and tear has occurred or between coats

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Pre-sanding tasks	<ul style="list-style-type: none"> • may include isolating and/or encapsulating the job site, nail punching, filling, scraping, sweeping, vacuuming, cleaning and removal of all foreign objects such as nails, tacks, staples, etc
Tools and equipment	<ul style="list-style-type: none"> • are to include hammers, scrapers, nail punches, brooms and vacuums
Materials	<ul style="list-style-type: none"> • are to include but are not limited to sanding belts, sanding paper, discs, oil and lubricants and cleaning materials
Sanding equipment	<ul style="list-style-type: none"> • may include split drum or belt sander, orbital or rotary finishing sanding machine
Edge sanding	<ul style="list-style-type: none"> • is to include edge sanding machines both rotary and orbital using the full range of grit papers depending on the general floor sanding process in train
Finish sanding	<ul style="list-style-type: none"> • is to include split drum and or belt floor sanding machines using 60 - 100 grit papers
Surface inspection	<ul style="list-style-type: none"> • is to ensure that surface is free from dust and debris, moisture content is acceptable and stable and any preservatives, protective coatings or other contaminants are adequately removed
Work sequence	<ul style="list-style-type: none"> • is to include preparation, inspection, coating application(s) and intermediate steps, finalisation and acceptance inspection
Application methods	<ul style="list-style-type: none"> • may include, trowels, applicators.
Filling material	<ul style="list-style-type: none"> • fillers are to include oil based, water-based and plastic (one-pot) filler
Fine sanding equipment	<ul style="list-style-type: none"> • is to include but limited to rotary and orbital floor sanding machines using 100 - 200 grit paper

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Timber/Sanding and Finishing
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Co-requisite units

Co-requisite units		

LMFFL3605A Apply finishes to cork flooring

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to select coating systems appropriate for the job, to prepare for the work and to apply the selected finishes to cork floors.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of flooring technology operations. The competency applies to an on site environment and involves application of skills and knowledge at a trade worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and prepare for work requirements	<p>1.1. Applicable legislative, OHS and organisational requirements relevant to the application of finishes are verified and complied with</p> <p>1.2. Instructions and/or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. Coating material is selected with regard to durability, longevity, aesthetics, manufacturer recommendations and client expectations</p> <p>1.4. Selected coating materials are assessed as being compatible with each other, with the surface to be finished and with manufacturer recommendations</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.6. Surface to be finished is inspected and assessed as being ready for coating</p> <p>1.7. Work sequence is planned to ensure efficiency and quality of application</p> <p>1.8. Workplace health and safety requirements, including isolation, ventilation and other personal protection needs, are observed throughout the work</p>
2. Apply finishing system	<p>2.1. Ventilation is checked before chemical fumes are released, and all OHS requirements are met including use of personal protective equipment</p> <p>2.2. Environmental protection regulations are complied with</p> <p>2.3. Coating material is applied in accordance with manufacturer recommendations</p> <p>2.4. Recommended drying times between coats are observed</p> <p>2.5. Buffing or sanding between coats, where required, is carried out according to manufacturer recommendations</p> <p>2.6. Final finish meets the requirements of the job</p>
3. Complete housekeeping	<p>3.1. Unused materials are resealed and stored</p> <p>3.2. Tools and equipment are cleaned, maintained and stored</p> <p>3.3. Work area is cleaned and waste material is removed and disposed of safely</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4. Barriers and signs are removed and stored 3.5. Workplace documentation/reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate cork floor finishing problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate coating material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of:
 - tools and materials
 - cork coating techniques
- seek learning opportunities
- use the workplace technology related to the application of finishes, including tools, equipment, calculators and measuring devices
- interpret the technical specifications of materials and analyse their properties to optimise their use

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the application of finishing systems
- organisational and site standards, requirements, policies and procedures for finishing and coating
- methods of floor preparation from basic sanding to finishing sanding and edging
- characteristics of timber floor finishing in relation to ventilation, moisture content

REQUIRED SKILLS AND KNOWLEDGE

- and reaction to change of temperature and relative humidity
- type, characteristics, uses and limitation of coating materials, including manufacturer recommendations
- types and uses of floor finishing tools and equipment
- workplace safety systems related to cork floor finishing processes
- work flow in relation to the application of finishes to cork floors
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- appropriate mathematical procedures for estimation and measurement
- procedures for the recording, reporting and maintenance of workplace records and information.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for applying finishes to timber, parquetry and cork floors
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including the use of personal protective equipment
- Establish and maintain appropriate ventilation
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - minimise the risk of injury to self and others
 - achieve a final finish in accordance with Australian Standards and accepted industry practices
- Complete a minimum application of two differently based coating/finishing products
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Identify faults/problems and identify and carry out corrective action

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace.
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - a realistic finishing requirement

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • materials and equipment relevant to the application of finishes • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Instructions	<ul style="list-style-type: none"> Workplace procedures relating to the use and operation of tools and equipment Workplace instructions, including job sheets, plans, drawings and designs Workplace procedures relating to reporting

RANGE STATEMENT	
	<p>and communications</p> <ul style="list-style-type: none"> • Manufacturer recommendations for the use of equipment and materials
Cork floor coating materials	<ul style="list-style-type: none"> • may include but are not limited to waxes, oils, oleoresins, one can methane oils, resin solutions, epoxy resins, two can epoxy resins, two can polyurethanes, moisture curing polyurethanes and water-based polyurethanes
Tools and equipment	<ul style="list-style-type: none"> • are to include orbital sander, rotary sander, hand sander, vacuum cleaner, brushes, applicators, rollers, roller tray, hammer, nail punch and spatula
Surfaces to be finished	<ul style="list-style-type: none"> • are confined to cork flooring
Surface inspection	<ul style="list-style-type: none"> • is to ensure that surface is free from dust and debris, moisture content is acceptable and stable and any preservatives, protective coatings or other contaminants are adequately removed
Work sequence	<ul style="list-style-type: none"> • is to include preparation, inspection, coating application(s) and intermediate steps, finalisation and acceptance inspection
Workplace health and safety requirements	<ul style="list-style-type: none"> • may include personal protective equipment which is to include that prescribed under legislation, regulation and enterprise policies and practices • may include isolation processes including barriers, tapes and entry access controls • may include breathing support and ventilation extraction systems
Application methods	<ul style="list-style-type: none"> • may include rags, brushes, rollers, applicators and spatula

Unit Sector(s)

Unit sector	Flooring Technology
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Competency field

Competency field	Sanding and finishing
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Co-requisite units

Co-requisite units		

LMFFM1001B Construct a basic timber furnishing product

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to construct, assemble and finish a basic timber furnishing product
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements, including design variations, tolerances, process, materials, finish and quantity</p> <p>1.2. Construction and assembly sequence are planned</p> <p>1.3. Procedures are determined for checking quality at each stage of the process</p> <p>1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.5. Suitable work area is selected for the task</p> <p>1.6. Preparatory drawings/set-outs for tasks are confirmed</p> <p>1.7. Cutting list for project components is accessed and interpreted</p> <p>1.8. Materials are selected following work instructions</p> <p>1.9. Tools and equipment suitable for construction are identified and checked for safe and effective operation</p>
2. Complete construction	<p>2.1. Material is set out and prepared according to work instructions and components are marked according to workplace procedures</p> <p>2.2. Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications</p> <p>2.3. Components are manufactured, including any specified shapes, angles or curves, and checked against set-outs and job requirements</p> <p>2.4. Components are assembled using jigs and/or clamps and fastenings</p> <p>2.5. Adhesives are applied according to workplace procedures and/or manufacturers' instructions</p> <p>2.6. Joining process is undertaken according to workplace procedures</p> <p>2.7. Assembled product is checked for compliance with specifications</p> <p>2.8. Item is finished in accordance with work instructions</p>
3. Finalise operation and maintain equipment	<p>3.1. Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures</p> <p>3.2. Off-cuts and unused materials are collected and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>stored for reuse or disposed of following workplace procedures</p> <p>3.3. Waste and scrap materials are dealt with following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination with site supervisor, other workers and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate construction problems, avoid reworking and avoid wastage
- use the limited workplace technology related to this construction, including tools, equipment, materials and measuring devices

Required knowledge

- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs
- workflow in relation to furniture construction
- identification of hand and/or power tools, materials, equipment, processes and procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work instructions and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment or products
 - achieve required production output and product quality
- Adapt or vary furnishing product designs
- Construct, assemble and finish at least one basic furnishing product from the list in the Range Statement
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Access to plans, hand and/or power tools, equipment, materials, woodworking machinery and a work area.

Method of Assessment

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be conducted in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Basic timber furnishing products may typically include but are not limited to:

- occasional and coffee tables
- jewellery boxes
- tool boxes
- CD racks
- small cabinets
- entertainment units
- timber stools and clocks

Unit context

- OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work involves reading and interpreting the project plan, using hand and power tools, operating basic woodworking machinery, applying quality requirements and applying product finishing techniques and materials
- Competency may be demonstrated in workplaces or simulated workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture and/or furniture components or a suitably simulated environment

Tools and equipment may include:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes

RANGE STATEMENT	
	<ul style="list-style-type: none"> • hand saws • power saws • cordless drills/screwdrivers • power drills • fixing and joining devices • jigs • clamping devices • pincers
Machines may include:	<ul style="list-style-type: none"> • band saws • cross cut saws • rip saws • panel planers • belt sander • horizontal borers • vertical drill presses • pedestal grinders and hand wood turning lathes
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • timber • manufactured board • adhesives • screws • nails • bolts • dowels • metal fasteners • steel • plastics • primers and coating materials
Checking of constructed product is to cover:	<ul style="list-style-type: none"> • squareness • alignment • wind and hardware • fittings and attachments
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting

RANGE STATEMENT	
	and communication <ul style="list-style-type: none"> Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM1002B Operate basic woodworking machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to operate basic woodworking machines used for sawing, planing, sanding and drilling in the production of furniture
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to identify job requirements, including quality, materials, equipment, and quantities 1.2. Workplace health and safety requirements, including ventilation requirements and personal protection needs, are observed throughout the work 1.3. Material for machining is selected and inspected for quality 1.4. Machines, cutting tools and jigs are identified and checked for safe and effective operation
2. Operate machines	2.1. Safety equipment, including emergency stops, gauges, guards and controls are checked 2.2. Machine start-up procedure is carried out in accordance with manufacturers' instructions 2.3. Material is fed into machine in accordance with manufacturers' instructions, safe handling procedures and standard workplace operating procedures 2.4. Machine is operated in accordance with its designed capacity and purpose, tooling requirements and to manufacturers' recommendations 2.5. Machine operation is monitored to ensure product quality and output 2.6. Waste quantities are checked and minimised 2.7. Items that do not meet quality requirements are recycled or discarded according to workplace procedures 2.8. Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons
3. Clean up work area and maintain equipment	3.1. Material that can be reused is collected and stored 3.2. Waste and scrap are removed following workplace procedures 3.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures 3.4. Unserviceable equipment is reported in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, machine operations, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems
- plan and organise activities, including the preparation of the worksite and the obtaining of equipment and materials to avoid any back tracking, or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- apply basic arithmetical processes
- use checking techniques to identify, avoid or solve work problems
- use the workplace technology related to machine operations, including tools, equipment and basic measuring devices

Required knowledge

- the characteristics, uses and limitations of basic woodworking machines
- general workplace quality standards and procedures
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Identify work requirements
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Operate and monitor the machines and complete the tasks identified in the Range Statement for:
 - one saw
 - one planer
 - one drill
 - one sander
- Work effectively with others

Resource Implications

Access to basic woodworking machinery as identified in the Range Statement, standard operating procedures, and unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

The unit scope is to cover a minimum of one saw, one planer, one drill and one sander and related tasks from the following list:

- cross cut saw
- docking (oversize + 20mm)
- docking (accurate to +/- 0.25mm)
- docking square (no tolerance)
- rip saw
- parallel rip (oversize by 5mm+)
- scroll band saw
- off fence ripping
- freehand ripping
- freehand curve cutting
- panel saw
- cut flat panel board (off rip fence using scribe saw)
- cut flat panel board (off cross-cut fence using scribe saw)
- surface planer (buzzer/jointer)
- machine face
- machine edge
- panel planer (thicknesser)
- parallel plane width
- parallel plane thickness
- bobbin sander
- sand concave surface
- disc sander
- sand straight surface
- sand end grain
- belt sander (linisher)
- sand flat surfaces
- vertical drill press
- drill holes to pre-determined depths vertically
- select and replace drill bits
- hinge boring
- horizontal borer (single bit)

RANGE STATEMENT	
	<ul style="list-style-type: none"> • drill holes to pre-determined depths horizontally • select and replace drill bits
Unit context	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components
Material to be machined may include but is not limited to:	<ul style="list-style-type: none"> • solid timber and manufactured board
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM2001B Use furniture making sector hand and power tools

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use hand and power tools in applications relating to the furniture making sector of the furnishing industry
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hand and power tools	1.1.Types of hand and power tools and their functions identified 1.2.Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3.Sources of power supply recognised
2. Select hand tools	2.1.Hand tools selected are consistent with needs of the job 2.2.Selected hand tools are checked for serviceability and safety and any faults reported to supervisor 2.3.Equipment is selected to hold or support material for hand tools application where applicable
3. Use hand tools	3.1.Material is located and held in position for hand tool application 3.2.Hand tools are safely and effectively used according to their intended use 3.3.Hand tools are safely located when not in immediate use
4. Select power tools	4.1.Power tools are selected consistent with needs of the job in accordance with conventional work practice 4.2.Power tools are visually checked for serviceability and safety in accordance with OH&S requirements and any faults reported to supervisor 4.3.Equipment is selected to hold or support materials for power tool application as applicable
5. Use power tools	5.1.Material is located and held in position for power tool application as applicable 5.2.Power tools are safely and effectively used in application processes 5.3.Power tools are safely located when not in use
6. Clean up work area and tools	6.1.All tools are cleaned, maintained and stored 6.2.Equipment is cleaned, maintained and stored 6.3.Work area is cleared and waste removed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to hand and power tools, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate problems, avoid reworking and avoid wastage
- use workplace technology related to the operation and maintenance of hand and power tools

Required knowledge

- types, characteristics, uses, limitations and maintenance requirements of hand tools commonly used in furniture production
- types, characteristics, uses, limitations and maintenance requirements of power tools commonly used in furniture production
- workplace safety requirements and OHS legislation
- workflow within the workplace

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Locate and apply relevant information related to hand and power tools
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, tools, equipment or products
 - maintain required production output and product quality
- Adopt and carry out correct procedures prior to and during use of the range of hand and power tools stipulated in the range statement
- Carry out operator maintenance on hand and power tools, including the grinding of:
 - chisels
 - hard plane blades or irons
 - drill bits
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Furniture making sector hand and power tools. Materials used in the manufacturing and/or installation of furnishing products.

Method of Assessment

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment may be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment,

EVIDENCE GUIDE

	materials, work instructions and deadlines.
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Hand tools for furniture making are to include, but not be limited to:

- hand planes
- chisels
- hand saws
- spokeshave
- hammer
- mallet
- marking-out tools
- files
- rasps
- scraper
- screwdrivers and hand drill

Power tools for furniture making are to include, but not be limited to:

- drop saw
- circular power saw
- planer
- drill
- jig saw
- router
- trimmer
- biscuit machine
- brad/nail and staple gun and sanders

Unit scope

Work requires individuals to demonstrate skill, accuracy and dexterity in the application of tools to perform work tasks which should include dressing materials, cutting joints, finishing surfaces, cutting straight and compound angles, jointing materials, edge trimming and the basic grinding of cutting tools

Unit context

- OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental

RANGE STATEMENT	
	legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
Fault reporting	Reporting of faults in the operation of hand and power tools may be verbal or written
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM2002B Assemble furnishing components

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to assemble timber components to produce furniture frames or furniture
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for assembly	<p>1.1. Work instructions are used to determine job requirements, including design, tolerances, process, materials, finish and quantity</p> <p>1.2. Assembly sequence are planned</p> <p>1.3. Procedures are determined for checking quality at each stage of the process</p> <p>1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.5. Suitable work area is selected for the task</p> <p>1.6. Tools and equipment suitable to the fixing method are selected and checked for safe operation</p> <p>1.7. Components, hardware, fittings and attachments are collected</p> <p>1.8. Fixing and joining devices are selected in line with work instructions and type of materials to be joined</p> <p>1.9. Jigs are selected and checked for suitability of purpose</p>
2. Assemble components	<p>2.1. Components are laid out and joined using jigs and appropriate fastenings</p> <p>2.2. Hand and/or power tools and equipment are used as required</p> <p>2.3. Assembled frame is checked for compliance with specifications</p> <p>2.4. Components are prepared, assembled and fitted as per specification</p> <p>2.5. Frames which do not meet quality specifications are repaired or tagged for further processing or recycling/disposal</p> <p>2.6. Finished products are organised and stored in holding area</p>
3. Clean work area and maintain equipment	<p>3.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures</p> <p>3.2. Waste and scrap are removed following workplace procedures</p> <p>3.3. Tools and equipment used are cleaned, inspected for serviceable condition and stored appropriately in accordance with workplace procedures</p> <p>3.4. Equipment and work area clean-up is maintained in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of common furnishing components
- the interpretation of basic furniture plans
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Assemble at least four furnishing components from the list in the Range Statement
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to plans, hand and/or power tools, equipment, materials, cauls and jigs, woodworking machinery, and a work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Furnishing components may include, but are not limited to:

- carcasses
- doors
- drawers
- frames
- shelves
- ends
- tops and limited basic end items

Unit context

- OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the assembly of furnishing components
- Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components

Tools and equipment include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws

RANGE STATEMENT	
	<ul style="list-style-type: none"> • power saws • power drills/screwdrivers • clamps • screwdrivers • pincers • pneumatic tools
Materials to be used may include, but are not limited to:	<ul style="list-style-type: none"> • timber • manufactured board • glues • screws • nails • dowels and knock-down fittings
Assembled component checking is to cover:	<ul style="list-style-type: none"> • alignment and squareness, • correct number and fitting of fasteners, • hardware, fittings and attachments, and • conformity to work instruction and quality requirements
Storage requirements	Storage of finished products must ensure that there is no obstruction to traffic, components are not damaged in storage, incompatible items are not stored together, and products are arranged to match the sequence of work
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM2003B Select and apply hardware

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to select and apply hardware to new and refurbished furniture
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare work	1.1. Work instructions are used to determine job requirements, including design, colour, finish process and required hardware quality 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Types of hardware are identified and selected for the work 1.4. Tools, equipment and accessories for application are identified and checked for safe and effective operation 1.5. Surfaces are cleaned and prepared to enable accurate colour matching
2. Apply and/or fit and finish	2.1. Hardware items are laid out/placed in the required design 2.2. Machinery is used in accordance with workplace procedures, including use of personal protective equipment 2.3. Joining/securing process is undertaken according to workplace procedures 2.4. Adhesives are applied according to workplace procedures and/or manufacturers' instructions 2.5. Work is checked against required quality standards
3. Finalise operation and maintain equipment	3.1. Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures 3.2. Machinery is cleaned and left in a safe mode 3.3. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices 3.4. Unused hardware is collected and stored for reuse or disposal following workplace procedures 3.5. Waste and scrap materials are dealt with following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate application problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the selection and application of hardware, including tools, equipment, calculators and measuring devices

Required knowledge

- types, characteristics, uses and limitations of hardware
- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self or others
- Select and apply each item in the range of hardware stipulated in the Range Statement
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to plans, hand and/or power tools, equipment, hardware materials, woodworking machinery, and a work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Hardware

Hardware to be covered here is to include at a minimum hinges, handles, drawer-runners, metal drawer systems, sliding rail systems, rotating storage systems and slide-out storage systems

Unit context

- OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in selecting and applying hardware
- Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- levelling devices
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- power drills/screwdrivers
- pneumatic tools

RANGE STATEMENT	
	<ul style="list-style-type: none"> • clamps • screwdrivers • pincers
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • timber • manufactured board • hinges • hardware consumables • cleaning chemicals and materials
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFFM2004B Apply sheet laminates by hand

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to apply laminates by hand, including the preparation, layout, application and finalisation processes
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare the work	1.1. Work instructions are used to determine job requirements, including: process, materials, finish and quantity 1.2. Application sequence is planned 1.3. Procedures are determined for checking quality at each stage of the process 1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.5. Suitable work area is selected for the task 1.6. Tools and equipment suitable for application are identified and checked for safe and effective operation
2. Layout and prepare materials	2.1. Laminates are selected and checked for flaws following work instructions 2.2. Laminates are prepared for application and laid out 2.3. Suitable joining processes are selected and prepared
3. Apply and/or fit and finish	3.1. Laminates are measured, marked and cut to size and applied to the base material 3.2. Tools and equipment are used in accordance with workplace procedures, including use of personal protective equipment 3.3. Adhesives are applied according to workplace procedures and/or manufacturers' instructions 3.4. Final trim and finishing are completed to specifications 3.5. Work is checked against required quality standards
4. Finalise operation and maintain equipment	4.1. Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures 4.2. Tools and equipment are cleaned and left in a safe mode 4.3. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices 4.4. Off-cuts and unused materials are collected and stored for reuse or disposal following workplace procedures 4.5. Waste and scrap materials are dealt with following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate application problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the application, including tools, equipment, calculators and measuring devices

Required knowledge

- types, characteristics, uses and limitations of laminates
- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, tools, equipment or products
 - maintain required production output and product quality
- Apply and finish laminates to at least three different surfaces, including at least two requiring laminate edging
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to plans, hand and/or power tools, equipment, laminates and finishing materials, woodworking machinery, and a work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in applying laminates by hand
- Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- power drills/screwdrivers
- pneumatic tools
- clamps
- screwdrivers
- rollers
- laminate trimmers and cutters and hand routers

Materials to be used may include but are not limited to:

- timber
- manufactured board
- laminates

RANGE STATEMENT	
	<ul style="list-style-type: none"> • timber strips • adhesives and cleaning materials
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to use and operation of tools and equipment • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturers' instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM2005B Join solid timber

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to join solid timber required for the manufacture of solid timber flat surfaces
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare the work	1.1. Work instructions are used to determine job requirements including process, materials, finish and quantity 1.2. Work sequence is planned 1.3. Procedures are determined for checking quality at each stage of the process 1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.5. Suitable work area is selected for the task 1.6. Tools and equipment suitable for application are identified and checked for safe and effective operation
2. Layout and prepare materials	2.1. Timbers are selected and checked for defects following work instructions 2.2. Suitable joining processes are selected and prepared 2.3. Timbers are prepared for joining and laid out
3. Join timber	3.1. Timbers are measured, marked and cut to size 3.2. Machinery is used in accordance with workplace procedures, including use of personal protective equipment 3.3. Adhesives are applied according to workplace procedures and/or manufacturers' instructions 3.4. Final trim and finishing are completed to specifications 3.5. Work is checked against required quality standards
4. Finalise operation and maintain equipment	4.1. Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures 4.2. Machinery is cleaned and left in a safe mode 4.3. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices 4.4. Off-cuts and unused materials are collected and stored for reuse or disposal following workplace procedures 4.5. Waste and scrap materials are dealt with following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate installation problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the installation of underlay and gripper strips, including tools, equipment, calculators and measuring devices

Required knowledge

- types, characteristics (including cupping, expansion, twisting, bowing, spring and grain direction), uses and limitations of timbers
- the interpretation of plan representation of furniture design
- joining techniques and their effect on timbers
- types of sawing methods, including back sawn and quarter sawn, and the impact of these on joining
- preparation of drawings/set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical Aspects of Evidence</p>	<ul style="list-style-type: none"> • Interpret work order and locate and apply relevant information • Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment • Follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> • minimise the risk of injury to self and others • prevent damage to goods, equipment and products • maintain required production output and product quality • Join at least four solid timber tops of a minimum of three sections and using a minimum of four different widening joints • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
<p>Resource Implications</p>	<p>Access to plans, hand and/or power tools, equipment, joining and finishing materials, woodworking machinery, and a work area.</p>
<p>Method of Assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.</p>
<p>Context of Assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Joining techniques are to cover widening joints, including the following edge joining methods:

- butt, dowel
- moulded edge joint (finger-joint, tongue in groove, zig-zag)
- biscuit joint
- slip-tongue joint

Unit context

- OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in joining solid timber
- Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components

Machines may include:

- panel saw
- cross-cut saw
- rip saw
- surface planers
- panel planer
- spindle moulder
- sanders and vertical and horizontal drills

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels

RANGE STATEMENT	
	<ul style="list-style-type: none"> • chisels • planes • hand saws • power saws • power drills • biscuit machines • pneumatic tools • dowel jigs • hoses • clamps and pincers
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • solid timber • plywoods • adhesives abrasives and cleaning materials
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturers' instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM2006B Hand make timber joints

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to join timber by constructing joints using hand and portable power tools
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for work	1.1. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.2. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 1.3. Product purpose, furniture style and joint type are identified from workplace documentation 1.4. Tools, adhesives and fasteners are selected to match the joint type
2. Make joint	2.1. Cutting and joining lines are marked out to suit joint type 2.2. Measurements and calculations are checked for accuracy to ensure quality outcomes 2.3. Timber is joined in accordance with workplace requirements 2.4. Fasteners and adhesives are used to make joints firm where required 2.5. Finished joint is checked against quality requirements
3. Complete housekeeping	3.1. Unused materials are stored or recycled as required 3.2. Tools and equipment are cleaned and stored appropriately 3.3. Work area is cleaned and rubbish disposed of appropriately 3.4. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, estimate carpet requirements and other material requirements
- use pre-checking and inspection techniques to anticipate installation problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the installation of conventional unjoined carpet, including tools, equipment, calculators and measuring devices

Required knowledge

- characteristics, properties and selection criteria of adhesives used
- capabilities and limitations of tools used
- matching requirements of adhesives and fasteners to timbers/materials used
- workflow in relation to the furniture items being made or repaired

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Select appropriate joint types for the furniture item
- Utilise at least three different adhesive types
- To produce a minimum of four different joint types as specified in the Range Statement in accordance with industry standards on tolerances with at least two produced substantially by hand operations
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Timber, chisels, mallets, mortise gauges, vernier dial calipers, vices, dovetail saws, planes, files and drills.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant carpet installation equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Joins include:

- dowel
- mortise and tenon
- dovetail
- lap joint
- biscuit joint
- finger joint
- housing joint
- mitre and bridle joints

Unit context

- Work involves the use of tools to create hand made timber joints
- Workplace health and safety requirements may include: OH&S legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent
- Work is carried out in accordance with legislative obligations, organisation insurance requirements, environment legislation, and manual handling procedures and relevant regulations

Tools and equipment are to include:

- chisels
- mallets
- mortise gauges
- vernier calipers
- vices
- dovetail saws
- tenon saws
- coping saws
- planes
- files
- hand drills
- power drills
- dowel jigs and power routers

RANGE STATEMENT	
Tools and equipment may also include:	<ul style="list-style-type: none"> • portable biscuit machines • power planers • power saws and power sanders
Timbers may include:	<ul style="list-style-type: none"> • indigenous and overseas timbers
Workplace requirements include:	<ul style="list-style-type: none"> • visual appearance • tolerance • gaps or play in joints and strength
Quality requirements include:	<ul style="list-style-type: none"> • alignment • neatness • firmness and acceptable tolerances
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools • Production planning figures • Work instructions, including job sheets, plans, drawing and designs • Workplace procedures relating to reporting and communication • Manufacturers' instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM2007B Follow plans to assemble production furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to assemble timber production furniture using modular construction methods and components to a given plan
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for assembly	1.1. Work instructions are used to determine job requirements, including design, tolerances, process, materials, finish and quantity 1.2. Assembly sequence is planned 1.3. Procedures are determined for checking quality at each stage of the process 1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.5. Suitable work area is selected for the task 1.6. Tools and equipment suitable to the assembly are selected and checked for safe operation 1.7. Fixing and joining devices are selected in line with work instructions and type of materials to be joined 1.8. Components, hardware, fittings and attachments are collected
2. Assemble furniture	2.1. Components are laid out and joined using appropriate fastenings 2.2. Hand and/or power tools are used as required 2.3. Assembled furniture is checked for compliance with specifications 2.4. Doors, drawers, shelves and/or runners are prepared and fitted as per set out 2.5. Hardware and decorative accessories are applied to specification 2.6. Item is prepared for finishing, including the removal of bruises, scratches, dents and marks 2.7. Work is checked against required standard and non-conforming items rectified 2.8. Finished products are organised and stored in holding area

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, estimate material requirements
- use pre-checking and inspection techniques to anticipate installation problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the assembly including tools, equipment, calculators and measuring devices

Required knowledge

- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Assemble at least two items of production furniture, one of manufactured board and one of solid timber construction, with each featuring:
 - a door
 - a drawer and
 - shelving
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Access to plans, hand and/or power tools, equipment, materials, cauls and jigs, woodworking machinery, and a work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Furniture may include but is not limited to:

- wall units
- vanity units
- kitchen cabinets
- side-boards/buffets
- drawer units
- display cabinets
- counters
- tables
- beds and clocks

Unit context

- OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the assembly of furniture
- Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws

RANGE STATEMENT	
	<ul style="list-style-type: none"> • power saws • power drills/screwdrivers • pneumatic tools • clamps • screwdrivers • pincers
Materials to be used may include, but are not limited to:	<ul style="list-style-type: none"> • timber • manufactured board • glass • alloys • adhesives • screws • nails • dowels • knock-down fittings • metal fasteners and associated hardware
Assembled furniture checking process is to cover:	<ul style="list-style-type: none"> • alignment and squareness • correct number and fitting of fasteners • hardware, fittings and attachments, and • conformity to work instruction and quality requirements
Storage of assembled furniture must ensure that:	<ul style="list-style-type: none"> • there is no obstruction to traffic • products are not damaged in storage • incompatible items are not stored together, and • products are arranged to match the sequence of work
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM2008B Bend and form cane

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to bend and form cane for use in furniture construction
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.2. Tools, machines and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 1.3. Furniture design, tolerances, process, materials and quantities are determined from work instructions 1.4. Work sequence is planned 1.5. Procedures are determined for checking quality at each stage of the process 1.6. Suitable work area is selected for the task 1.7. Preparatory drawings/set-outs for tasks are completed where required
2. Complete bending and forming process	2.1. Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications 2.2. Materials are visually inspected for flaws and faults 2.3. Cane is machine sanded to remove exterior blemishes, flaws or faults 2.4. Cane is prepared by straightening where required and marked for bending 2.5. Cane is heated in ovens in accordance with design/pattern bending requirements 2.6. Cane is bent in accordance with design/pattern requirements 2.7. Product is checked against plans at identified checkpoints to ensure compliance with specifications 2.8. Non-conformity with the required quality standards is rectified
3. Finalise operation	3.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices 3.2. Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures 3.3. Off-cuts and unused materials are collected and stored for reuse or disposed of following workplace procedures 3.4. Waste and scrap materials are dealt with following

ELEMENT	PERFORMANCE CRITERIA
	workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate installation problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the installation, including tools, equipment, calculators and measuring devices

Required knowledge

- the interpretation of plan representation of cane furniture design
- the preparation of drawings/set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to cane bending and forming

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Apply ventilation standards
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Bend and form cane for a minimum of three furniture items, including
 - two or three seater lounge
 - oval dining table
 - dining chair
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to plans, hand and/or power tools, equipment, machines, cane and a work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant machines, tools, equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Cane furniture may include:

- lounge chairs
- dining chairs
- tables
- side tables
- coffee tables
- entertainment units
- bookcases

Unit context

- OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work involves reading and interpreting plans, developing set-outs, using hand and/or power tools, equipment and operating machinery
- Competency may be demonstrated in workplaces involved in the manufacture of cane furniture

Tools and equipment may include, but are not limited to:

- hand sanders and planers

Machines may include, but are not limited to:

- bench saws
- drop saws
- stationary sanding machines
- ovens
- bending presses

Personal protective equipment

Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices

RANGE STATEMENT	
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturers' instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM2009B Construct cane furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to construct and assemble cane furniture
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.2. Tools, machines and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 1.3. Furniture design, tolerances, process, materials and quantities are determined from work instructions 1.4. Construction and assembly sequence is planned 1.5. Procedures are determined for checking quality at each stage of the process 1.6. Suitable work area is selected for the task 1.7. Preparatory drawings/set-outs for tasks are completed 1.8. Cutting list for components is developed 1.9. Materials are selected following work instructions
2. Complete construction	2.1. Material is set out and prepared according to work instructions and components are marked according to workplace procedures 2.2. Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications 2.3. Components are manufactured, including any specified shapes, angles or curves, and checked against set out and job requirements 2.4. Components are assembled using jigs and/or clamps and fastenings 2.5. Adhesives are applied according to workplace procedures and/or manufacturers' instructions 2.6. Joining process is undertaken according to workplace procedures 2.7. Assembled furniture is checked for compliance with specifications 2.8. Furniture is prepared for finishing 2.9. Any non-conformity with the required quality standards is rectified
3. Finalise operation	3.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices 3.2. Work area is cleaned, hand and/or power tools and

ELEMENT	PERFORMANCE CRITERIA
	<p>equipment are cleaned, maintained and stored in accordance with workplace procedures</p> <p>3.3. Off-cuts and unused materials are collected and stored for reuse or disposed following workplace procedures</p> <p>3.4. Waste and scrap materials are dealt with following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the notification of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate inspection problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the construction including tools, equipment and measuring devices

Required knowledge

- the interpretation of plan representation of cane furniture design
- the preparation of drawings/set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to cane furniture production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Construct a minimum of three cane furniture items products, including:
 - two or three seater lounge
 - oval dining table
 - dining chair
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Access to plans, hand and/or power tools, equipment, cane and woodworking machinery, materials and a work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant construction equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Cane furniture may include:</p>	<ul style="list-style-type: none"> • lounge chairs • dining chairs • tables • side tables • coffee tables • entertainment units • bookcases
<p>Preparation for finishing</p>	<p>Preparation for finishing includes the application of binding cane/peel and the sanding of the furniture</p>
<p>Unit context</p>	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work involves reading and interpreting plans, developing set-outs, using hand and power tools and equipment and operating woodworking machinery. • Competency may be demonstrated in workplaces involved in the manufacture of cane furniture
<p>Tools and equipment may include, but are not limited to:</p>	<ul style="list-style-type: none"> • measuring tapes or rulers • hammers • mallets • squares • bevels • chisels • hand saws

RANGE STATEMENT	
	<ul style="list-style-type: none"> • power saws • power drills/screwdrivers • pneumatic tools • clamps • screwdrivers • pincers • nail guns • pin nailers • glue guns
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • band saws • docking saws • jig saws • bench saws • vertical drill presses and presses
Checking of constructed product is to cover:	<ul style="list-style-type: none"> • squareness • parallel • twist • and distortion
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • cane • timber • manufactured board • adhesives • screws • nails • binding cane • steel bars <p>metal recliner actions</p>
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM2010B Set up, operate and maintain basic static machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to operate and maintain basic static machines used for sawing, planing, sanding and drilling in the production of furniture
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities 1.2. Cutting list and job specifications are read and interpreted 1.3. Workplace health and safety requirements, including ventilation requirements and personal protection needs, are observed throughout the work 1.4. Material for machining is selected and inspected for quality 1.5. Machines, cutting tools and jigs are identified and checked for safe and effective operation 1.6. Procedures are determined for minimising waste material 1.7. Procedures are identified for maximising energy efficiency while completing the job
2. Set up machines	2.1. Safety equipment, including emergency stops, gauges, guards and controls are checked 2.2. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturers' instructions 2.3. Trial runs are conducted to check machine operation, accuracy and quality of finished work 2.4. Necessary adjustments are made to machine settings
3. Operate machines	3.1. Machine start-up procedure is carried out in accordance with manufacturers' instructions 3.2. Material is fed into machine in accordance with manufacturers' instructions, safe handling procedures and standard workplace operating procedures 3.3. Machine is operated in accordance with its designed capacity and purpose, tooling requirements and to manufacturers' recommendations 3.4. Machine operation is monitored to ensure product quality and output 3.5. Waste quantities are checked and minimised 3.6. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures 3.7. Problems with the required work and/or the operation of the machine are identified and reported

ELEMENT	PERFORMANCE CRITERIA
	to appropriate persons
4. Clean up work area and maintain equipment	4.1. Material that can be reused is collected and stored 4.2. Waste and scrap are removed following workplace procedures 4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures 4.4. Operator maintenance is completed in accordance with manufacturers' specifications and site procedures 4.5. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures 4.6. Equipment and tooling are maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, machine operations, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate machining problems, avoid reworking and avoid wastage
- use the workplace technology related to machine operations, including tools, equipment and measuring devices

Required knowledge

- the range, characteristics, uses and limitations of basic static machines
- characteristics of materials and uses of products produced
- general workplace quality standards and procedures
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Read and interpret cutting lists and job specifications to prepare for work
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Identify, set up, operate and monitor the machines and complete the tasks identified in the Range Statement (above)
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to basic static machinery as identified in the Range Statement, standard operating procedures, and unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

The unit scope is to cover all the following basic machines and functions or tasks:

- cross-cut saw
- remove/replace saw blade
- blade selection/identification
- docking (oversize + 20mm)
- docking (accurate to +/- 0.25mm)
- docking square (no tolerance)
- machine fault finding
- rip saw
- remove/replace saw blade
- blade selection/identification
- set up riving knife to AS 1473
- parallel rip (oversize by 5mm+)
- machine fault finding
- scroll band saw
- remove/replace saw blade
- fold, unfold, reverse saw blade
- blade selection
- off fence ripping
- freehand ripping
- freehand curve cutting
- machine fault finding
- panel saw
- remove/replace saw blade
- set up scribe saw
- set up riving knife to AS 1473
- cut flat panel board (off rip fence using scribe saw)
- cut flat panel board (off cross-cut fence using scribe saw)
- machine fault finding
- surface planer (buzzer/jointer)
- machine face
- machine edge

RANGE STATEMENT

	<ul style="list-style-type: none"> • machine chamfer or bevel • machine fault finding • panel planer (thicknesser) • parallel plane width • parallel plane thickness • machine fault finding • bobbin sander • sand concave surface • machine fault finding • disc sander • sand straight surface • sand convex surface • sand end grain • machine fault finding • belt sander (including finisher, edge sander and stroke [lacey] sander) • remove/replace belts • sand veneer face of flat panel board • sand solid timber face • sand solid timber edges (remove arris/shape) • machine fault finding • vertical drill press • select and replace drill bits • drill holes to pre-determined depths vertically • hinge boring • machine fault finding • horizontal borer (single bit) • select and replace drill bits • drill holes to pre-determined depths horizontally • hinge boring • machine fault finding
Unit context	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set-up, operation and maintenance of machines • Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components
Material to be machined may include but is not limited to:	<ul style="list-style-type: none"> • solid timber • manufactured board and metal
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM2011B Apply manufactured board conversion techniques

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to apply manufactured board conversion techniques to produce furnishing component parts and manufactured board panel doors
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities 1.2. Cutting list and job specifications are read and interpreted 1.3. Workplace health and safety requirements, including ventilation requirements and personal protection needs, are observed throughout the work 1.4. Material for machining is selected and inspected for quality 1.5. Cutting patterns are applied to minimise waste material 1.6. Procedures are identified for maximising energy efficiency while completing the job
2. Set up machines	2.1. Safety equipment, including emergency stops, gauges, guards and controls are checked 2.2. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturers' instructions 2.3. Machines, cutting tools and jigs are identified and checked for safe and effective operation 2.4. Trial runs are conducted to check machine operation, accuracy and quality of finished work 2.5. Necessary adjustments are made to machine settings
3. Apply conversion techniques	3.1. Machine start-up procedure is carried out in accordance with manufacturers' instructions 3.2. Material is fed/placed into machine in accordance with manufacturers' instructions, safe handling procedures and standard workplace operating procedures 3.3. Machine is operated in accordance with its designed capacity and purpose, tooling requirements and to manufacturers' recommendations 3.4. Machine operation is monitored to ensure product quality and output 3.5. Waste quantities are checked and minimised 3.6. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures 3.7. Problems with the required work and/or the

ELEMENT	PERFORMANCE CRITERIA
	operation of the machine are identified and reported to appropriate persons
4. Clean up work area and maintain equipment	<p>4.1. Material that can be reused is collected and stored</p> <p>4.2. Waste and scrap are removed following workplace procedures</p> <p>4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures</p> <p>4.4. Operator maintenance is completed in accordance with manufacturers' specifications and site procedures</p> <p>4.5. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures</p> <p>4.6. Equipment and tooling are maintained in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, manufactured board conversion techniques, machine operations, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate conversion problems, avoid reworking and avoid wastage
- use the workplace technology related to conversion, including tools, equipment and measuring devices

Required knowledge

- types, characteristics, uses and limitations of manufactured board
- the range, characteristics, uses and limitations of panel-saw, scoring saw, NC beam saw and wall saw
- general workplace quality standards and procedures
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Read and interpret cutting lists and job specifications to prepare for work
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Apply at least five different conversion techniques/operations covering the:
 - preparation of cutting plans to minimise waste
 - selection of the correct materials
 - application of conversion techniques including at least one surfaced board requiring the use of a scoring saw
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to conversion machinery as identified in the Range Statement, standard operating procedures, and unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment,

EVIDENCE GUIDE

materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Products of conversion techniques are to include:</p>	<ul style="list-style-type: none"> • end panels • shelving • bench tops • backs • bottoms • doors and fixing rails
<p>Machines</p>	<p>Machines are to include panel saw and scoring saw and may include NC beam saw and wall saw</p>
<p>Unit context</p>	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set-up, operation and maintenance of machines • Competency may be demonstrated in workplaces involved in the production of manufactured board domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or components
<p>Tools and equipment are to include but are not limited to:</p>	<ul style="list-style-type: none"> • measuring devices • machine associated tools • materials handling equipment/lifting devices
<p>Manufactured board may include:</p>	<ul style="list-style-type: none"> • raw board • melamine surfaces • veneered board • plywood and hard board

RANGE STATEMENT	
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM2012B Set up, operate and maintain pressure and clamping machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up, operate and maintain pressure and clamping machines using their full potential and capacities in the production of furniture
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Material for machining is selected and inspected for quality 1.4. Pressure and clamping machines, cutting tools and jigs are identified and checked for safe and effective operation 1.5. Procedures are determined for minimising waste material 1.6. Procedures are identified for maximising energy efficiency while completing the job
2. Set up machines	2.1. Safety equipment, including emergency stops, gauges, guards and controls are checked 2.2. Pressure and clamping machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions 2.3. Trial runs are conducted to check machine operation, accuracy and quality of finished work 2.4. Necessary adjustments are made to machine settings
3. Operate machines	3.1. Machine start-up procedure is carried out in accordance with manufacturers' instructions 3.2. Material is placed into machine in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures 3.3. Machine is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations 3.4. Machine operation is monitored to ensure product quality and output 3.5. Items that do not meet quality requirements are recycled or discarded according to workplace procedures 3.6. Problems with the required work and/or the operation of the machine are identified and reported

ELEMENT	PERFORMANCE CRITERIA
	to appropriate persons
4. Clean up work area and maintain equipment	4.1. Material that can be reused is collected and stored 4.2. Waste and scrap are removed following workplace procedures 4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures 4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures 4.5. Operator maintenance is completed in accordance with manufacturers' specifications and site procedures 4.6. Tooling is maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to pressure and clamping operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate pressure and clamping problems, avoid reworking and avoid wastage
- use the workplace technology related to pressure and clamping, including tools, equipment, calculators and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of pressure and clamping machines
- pressure and clamping processes and techniques
- characteristics of materials and uses of products produced
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Read and interpret cutting lists and job specifications to prepare for work
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage and wastage of goods, equipment and products
 - maintain required production output and product quality
- Identify, set up, operate and maintain at least one pneumatically/hydraulically operated pressure and clamping machine to perform a significant production function covering three variable and different set up situations
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to pressure and clamping machinery as identified in the Range Statement, standard operating procedures, and unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace

EVIDENCE GUIDE	
	simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Pressure and clamping machines are to include:</p>	<ul style="list-style-type: none"> • manual clamps and presses • hydraulic vacuum presses and clamping machines and may include post forming machines
<p>Material to be pressed/clamped may include:</p>	<ul style="list-style-type: none"> • solid timber • manufactured board and decorative treatments • including laminates
<p>Products may include:</p>	<ul style="list-style-type: none"> • vacuum formed doors • widening joints • framed construction • drawers and laminating veneers
<p>Unit scope</p>	<p>Work requires individuals to read and interpret production instructions, complete adjustments to machine configurations and settings, using jigs and fixtures, selection and application of adhesives and the operation of machines to finish products</p>
<p>Unit context</p>	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines • Competency may be demonstrated in workplaces involved in the manufacture of domestic and commercial furniture, including

RANGE STATEMENT	
	kitchen and bathroom cabinets and/or furniture components
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • screwdrivers • hammers and spanners
Materials are to include:	<ul style="list-style-type: none"> • pressure and clamping machine consumables • oils and lubricants and trial materials
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3001B Construct chair and couch frames

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to construct and assemble chair and couch frames
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including design, tolerances, process, materials, finish and quantity 1.2. Construction and assembly sequence is planned 1.3. Procedures are determined for checking quality at each stage of the process 1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.5. Suitable work area is selected for the task 1.6. Preparatory drawings/set-outs for tasks are completed 1.7. Cutting list for components is developed 1.8. Materials are selected following work instructions 1.9. Tools and equipment suitable for construction are identified and checked for safe and effective operation
2. Complete construction	2.1. Material is set out and prepared according to work instructions and components are marked according to workplace procedures 2.2. Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications 2.3. Components are manufactured including any specified shapes, angles or curves and checked against set-outs and job requirements 2.4. Components are assembled using jigs and/or clamps and fastenings 2.5. Adhesives are applied according to workplace procedures and/or manufacturers' instructions 2.6. Joining process is undertaken according to workplace procedures 2.7. Assembled chair/couch is checked for compliance with specifications 2.8. Item is finished to suitable state for surface preparation 2.9. Any non-conformity with the required quality standards is rectified
3. Finalise operation and maintain	3.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices

ELEMENT	PERFORMANCE CRITERIA
equipment	<p>3.2. Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures</p> <p>3.3. Off-cuts and unused materials are collected and stored for reuse or disposed following workplace procedures</p> <p>3.4. Waste and scrap materials are dealt with following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills
<ul style="list-style-type: none"> • collect, organise and understand information related to work orders, plans and safety procedures • communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems • plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage • work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity • use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements • use pre-checking and inspection techniques to anticipate construction problems, avoid reworking and avoid wastage • use the limited workplace technology related to the construction, including tools, equipment, materials and measuring devices
Required knowledge
<ul style="list-style-type: none"> • the interpretation of plan representation of furniture design • the preparation of drawings/set-outs • workflow in relation to furniture production • identification of hand and/or power tools, materials, equipment, processes and procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment or products
 - maintain required production output and product quality
- Construct at least three significant chair and couch frames
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Access to plans, hand and/or power tools, equipment, materials, cauls and jigs, woodworking machinery, and a work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Chair and couch frames may include but are not limited to:

- dining chairs
- office chairs
- lounge chairs
- sofas/settees

Unit context

- OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work involves reading and interpreting plans, developing set-outs using hand and power tools, equipment and operating woodworking machinery
- Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture and/or furniture components

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- cordless drills/screwdrivers
- power drills
- fixing and joining devices

RANGE STATEMENT	
	<ul style="list-style-type: none"> • jigs • clamping devices • pinches
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • band saws • cross cut saws • docking saws • mitre saws • panel and rip saws • surface planers (buzzers) • panel planers (thicknessers) • lacey sanders • horizontal borers • vertical drill presses • edge sanders • pedestal grinders • wood turning lathes • presses
Materials to be used may include but not limited to:	<ul style="list-style-type: none"> • timber • manufactured board • adhesives • screws • nails • bolts • dowels • metal fasteners • steel • plastics
Checking of constructed product is to cover:	<ul style="list-style-type: none"> • squareness • alignment • wind and hardware • fittings and attachments
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting

RANGE STATEMENT	
	and communication <ul style="list-style-type: none"> Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3002B Construct furniture using leg and rail method

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to follow plans to construct and assemble furniture using leg and rail construction
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including design, tolerances, process, materials, finish and quantity 1.2. Construction and assembly sequence are planned 1.3. Procedures are determined for checking quality at each stage of the process 1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.5. Suitable work area is selected for the task 1.6. Preparatory drawings/set-outs/rods for tasks are completed 1.7. Cutting list for components is developed 1.8. Materials are selected following work instructions 1.9. Tools and equipment suitable for construction are identified and checked for safe and effective operation
2. Complete construction	2.1. Material is set out and prepared according to work instructions and components are marked according to workplace procedures 2.2. Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications 2.3. Components are manufactured, including any specified shapes, angles or curves and checked against set-outs and job requirements 2.4. Components are assembled using jigs and/or clamps and fastenings 2.5. Adhesives are applied according to workplace procedures and/or manufacturers' instructions 2.6. Joining process is undertaken according to workplace procedures 2.7. Assembled furniture is checked for compliance with specifications 2.8. Furniture is finished to suitable state for surface preparation 2.9. Any non-conformity with the required quality standards is rectified
3. Finalise operation	3.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures</p> <p>3.3. Off-cuts and unused materials are collected and stored for reuse or disposed following workplace procedures</p> <p>3.4. Waste and scrap materials are dealt with following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate construction problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the construction, including tools, equipment and measuring devices

Required knowledge

- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs/rods
- the types, characteristics, properties and limitations of timber used in furniture construction
- material selection and structural standards
- application of ergonomic principles and guidelines to furniture construction
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Construct a minimum of two furniture products which are to include:
 - a table with a drawer, and
 - a chair with shaped and angled components
- and require the jointing processes listed in the Range Statement
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to plans, hand and/or power tools, equipment, woodworking machinery, materials, and a work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Furniture to be constructed using the leg and rail method may include:

- dining
- occasional
- hall and side tables
- dining and occasional chairs
- and cabinets

Unit context

- OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components

Unit scope

Work involves reading and interpreting plans, developing set-outs, using static machines, using hand and power tools to construct furniture using traditional jointing methods (mortise and tenon, mitre, dowel and bridle)

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- cordless drills/screwdrivers

RANGE STATEMENT	
	<ul style="list-style-type: none"> • power drills • fixing and jointing devices • pneumatic tools • jigs • clamps and pincers
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • band saws • cross cut saws • jig saws • panel and rip saws • surface planers • panel planers • belt sanders • horizontal borers • vertical drill presses • furniture mortise and tenoner • dovetailers • pedestal grinders • wood turning lathes • veneer guillotines and presses
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • timber • manufactured board • adhesives • screws • nails • dowels • knock down fittings
Checking of constructed product is to cover:	<ul style="list-style-type: none"> • squareness • parallel • twist • and distortion and product faults
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational

RANGE STATEMENT	
	procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3003B Produce angled and curved furniture using manufactured board

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to construct and assemble manufactured board furniture using angled and curved construction methods
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements, including design, tolerances, process, materials, finish and quantity</p> <p>1.2. Construction and assembly sequence are planned</p> <p>1.3. Procedures are determined for checking quality at each stage of the process</p> <p>1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.5. Suitable work area is selected for the task</p> <p>1.6. Preparatory drawings and set-outs for tasks are completed</p> <p>1.7. Cutting list for components is developed</p> <p>1.8. Materials are selected following work instructions</p> <p>1.9. Tools and equipment suitable for construction are identified and checked for safe and effective operation</p>
2. Complete construction	<p>2.1. Materials are set out and prepared according to work instructions and components are marked according to industry practices</p> <p>2.2. Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications</p> <p>2.3. Materials are bent and formed in accordance with the plan</p> <p>2.4. Components are manufactured and checked against set out for tolerances, fit and accuracy</p> <p>2.5. Components are assembled and checked against set out for accuracy, fit, twist and distortion</p> <p>2.6. Doors, drawers and shelves are assembled and fitted</p> <p>2.7. Product is prepared for final finish, including the removal of bruises, scratches, dents and marks</p> <p>2.8. Product is checked against plans at identified checkpoints</p>
3. Finalise operation	<p>3.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices</p> <p>3.2. Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures</p> <p>3.3. Off-cuts and unused materials are collected and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>stored for reuse or disposed following workplace procedures</p> <p>3.4. Waste and scrap materials are dealt with following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to furniture design interpretation work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate production problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the production, including tools, equipment and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of manufactured board
- the interpretation of plan representation of furniture design
- the preparation of drawings and set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment or products
 - maintain required production output and product quality
- Produce a minimum of two significant manufactured board products which must include one curved cabinet with rails and one cabinet with glass shelves, panels and doors
- Conduct operator maintenance on machines and related tools and equipment
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to plans, hand and/or power tools, equipment, cauls and jigs, woodworking machinery, materials, and a work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Furniture

Manufactured board furniture is to include angled cabinets and curved cabinets with rails and may include counters and display units

Unit context

- OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work involves reading and interpreting plans, developing set-outs, using hand and/or power tools, equipment and operating woodworking machinery
- Competency may be demonstrated in workplaces involved in the manufacture of domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components

Tools and equipment include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws
- power saws
- power drills/screwdrivers
- pneumatic tools
- clamps
- screwdrivers

RANGE STATEMENT	
	<ul style="list-style-type: none"> • pincers
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • band saws • cross cut saws • mitre saws • panel saws • surface planers • panel planers • belt sanders • horizontal borers • vertical drill presses • dovetailers • pedestal grinders • veneer guillotines and presses
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • manufactured board • adhesives • screws • nails • dowels • knockdown fittings • glass • decorative finishes • abrasive paper and finishing materials
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3004B Produce angled and curved furniture using solid timber

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to construct and assemble furniture using angular construction methods
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including design, tolerances, process, materials, finish and quantity 1.2. Construction and assembly sequence are planned 1.3. Procedures are determined for checking quality at each stage of the process 1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.5. Suitable work area is selected for the task 1.6. Preparatory drawings and set-outs for tasks are completed 1.7. Cutting list for components is developed 1.8. Materials are selected following work instructions 1.9. Tools and equipment suitable for construction are identified and checked for safe and effective operation
2. Complete construction	2.1. Materials are set out and prepared according to work instructions and components are marked according to industry practices 2.2. Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications 2.3. Materials are bent and formed in accordance with the plan 2.4. Components are manufactured and checked against set-outs for tolerances, fit and accuracy 2.5. Components are assembled and checked against set-outs for accuracy, fit, twist and distortion 2.6. Doors, drawers and shelves are assembled and fitted 2.7. Product is prepared for final finish, including the removal of bruises, scratches, dents and marks 2.8. Product is checked against plans at identified checkpoints
3. Finalise operation	3.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices 3.2. Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures 3.3. Off-cuts and unused materials are collected and

ELEMENT	PERFORMANCE CRITERIA
	<p>stored for reuse reuse or disposed following workplace procedures</p> <p>3.4. Waste and scrap materials are dealt with following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to furniture design interpretation work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate production problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the production, including tools, equipment and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of solid timbers most common to furniture production
- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs/rods and geometrical concepts
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment or products
 - maintain required production output and product quality
- Produce a minimum of two significant timber products which must include:
 - one curved cabinet with rails, and
 - one item involving oval design using traditional construction methods and jointing
- Conduct operator maintenance on machines and related tools and equipment
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to plans, hand and/or power tools, equipment, cauls and jigs, woodworking machinery, materials, and a work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Furniture	Manufactured solid timber furniture is to include, at a minimum, angular structures and curved cabinets incorporating rails and oval design
Material bending and forming techniques are to include:	<ul style="list-style-type: none"> • steam/heat and bend • and groove and bend
Unit scope	Work involves reading and interpreting plans, developing set-outs, preparing and using jigs, templates and shaped cauls, using hand and/or power tools and equipment and operating woodworking machinery
Unit context	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Competency may be demonstrated in workplaces involved in the manufacture of solid timber domestic furniture, commercial furniture and/or furniture components
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • measuring tapes or rulers • hammers • mallets • squares • bevels • chisels • planes • hand saws • power saws • power drills/screwdrivers

RANGE STATEMENT	
	<ul style="list-style-type: none"> • pneumatic tools • clamps • screwdrivers • pincers
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • band saws • cross cut saws • mitre saws • panel and rip saws • surface planers • panel planers • belt sanders • horizontal borers • vertical • drill presses • dovetailers • pedestal grinders • wood turning lathes • veneer guillotines and presses
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • timber • adhesives • screws • nails • dowels • knockdown fittings • glass • decorative finishes • abrasive paper and finishing materials
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3005B Fabricate custom furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to plan, construct and assemble custom furniture in response to specific orders and job requests
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine custom job requirements, including design, tolerances, process, materials, finish and quantity 1.2. Construction and assembly sequence are planned 1.3. Procedures are determined for checking quality at each stage of the process 1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.5. Suitable work area is selected for the task 1.6. Preparatory drawings and set-outs for tasks are completed 1.7. Cutting list for components is developed 1.8. Materials are selected following work instructions 1.9. Tools and equipment suitable for construction are identified and checked for safe and effective operation
2. Complete construction	2.1. Materials are set out and prepared according to work instructions and components are marked according to industry practices 2.2. Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications 2.3. Materials are bent and formed in accordance with the plan 2.4. Components are manufactured and checked against set-outs for tolerances, fit and accuracy
3. Assemble custom furniture	3.1. Components are assembled and checked against set-outs for accuracy, fit, twist and distortion 3.2. Doors, drawers and shelves are assembled and fitted 3.3. Hardware and decorative accessories are applied to specification 3.4. Product is prepared for final finish, including the removal of bruises, scratches, dents and marks 3.5. Product is checked against plans at identified checkpoints
4. Clean work area and maintain equipment	4.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures 4.2. Waste and scrap are removed following workplace

ELEMENT	PERFORMANCE CRITERIA
	procedures 4.3. Tools and equipment used are cleaned, inspected for serviceable condition, maintained and stored appropriately in accordance with workplace procedures 4.4. Equipment and work area clean-up is maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to furniture design interpretation work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate production problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the fabrication, including tools, equipment and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of solid timbers most common to furniture production
- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs/rods
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling practices for equipment, products and materials
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment or products
 - maintain required production output and product quality
- Produce one significant furniture item
 - custom developed machining processes and outcomes
 - custom development and completion of assembly techniques and processes
 - the satisfaction of customer specifications in terms of dimensions, materials, function and aesthetics
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to plans, hand and/or power tools, equipment, cauls and jigs, woodworking machinery, materials, and a work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

EVIDENCE GUIDE	
Context of Assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Custom furniture</p>	<p>Custom furniture is defined as one-off manufacture in response to specific customer requirements. It does not include variations or modification to a production line item</p> <p>Custom furniture may include, but is not limited to: wall units, vanity units, kitchen cabinets, side-boards/buffets, drawer units, display cabinets, counters, tables, beds</p>
<p>Unit context</p>	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work involves reading and interpreting plans, customer liaison, developing set-outs, using hand and/or power tools, equipment and operating woodworking machinery • Competency may be demonstrated in workplaces involved in the manufacture of solid timber domestic furniture, commercial furniture and/or furniture components
<p>Material bending and forming techniques are to include:</p>	<ul style="list-style-type: none"> • steam and bend • and machined curves
<p>Tools and equipment may include, but are not limited to:</p>	<ul style="list-style-type: none"> • measuring tapes or rulers • hammers • mallets • squares • bevels • chisels

RANGE STATEMENT	
	<ul style="list-style-type: none"> • planes • hand saws • power saws • portable routers and trimmers • power drills/screwdrivers • pneumatic tools • hoses • clamps • screwdrivers and pincers
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • band saws • cross cut saws • mitre saws • panel and rip saws • surface planers • panel planers • shaping machines and jigs • sanders • horizontal borers • vertical drill presses • dovetailers • pedestal grinders • wood turning lathes • veneer guillotines and presses
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • timber • adhesives • screws • nails • dowels • metal fasteners • knockdown fittings • glass • decorative finishes and abrasive paper
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<p>Workplace procedures relating to the use of tools and equipment</p> <p>Work instructions, including job sheets, cutting lists, plans, drawings and designs</p>

RANGE STATEMENT	
	Workplace procedures relating to reporting and communication Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3006B Install furnishing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit applies to employees engaged in the installation of furnishing products to a given plan
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare the work	1.1. Work instructions are used to determine job requirements, including: location, type of installation, tolerances, process, finish and quality 1.2. Installation location and sequence are planned 1.3. Procedures are determined for checking quality at each stage of the process 1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.5. Hardware, fittings and attachments are collected 1.6. Tools and equipment suitable for installation are identified and checked for safe and effective operation 1.7. Fixing and joining devices are selected in line with work instructions and types of materials 1.8. Required installation aids are selected and checked for suitability for purpose
2. Complete installation	2.1. Site is prepared for installation 2.2. Furnishing products are prepared to site requirements 2.3. Hand and/or power tools and equipment are used in accordance with workplace requirements, including use of personal protective equipment 2.4. Fixing methods are undertaken according to site conditions 2.5. Installed furniture product is checked for compliance with specification 2.6. Tops and/or appliances are installed in accordance with plans and specifications 2.7. Hardware and decorative accessories are installed 2.8. Work is checked against required quality standards
3. Finalise operation clean work site	3.1. Work site is cleaned, hand and/or power tools are checked for serviceable condition, returned and stored in accordance with workplace procedures 3.2. Unused materials are returned and/or stored 3.3. Waste and scrap materials are dealt with following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, installation plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate installation problems, avoid reworking and avoid wastage
- use the limited workplace technology related to the installation, including tools, equipment and measuring devices

Required knowledge

- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs
- workflow in relation to furniture production
- identification of hand and/or power tools, materials, equipment, processes and procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, tools, equipment or products
 - maintain required production output and product quality
- Install four different and significant furnishing products, including at least:
 - one floor mounted, and
 - one wall mounted
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to plans, hand and/or power tools, equipment, materials, woodworking machinery, furnishing products and a work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Furnishing products for installation may include but are not limited to:

- kitchen cabinets
- bathroom cabinets
- wall units
- desks
- counters
- wardrobes
- dressing tables
- entertainment units
- laundry cabinets

Appliances to be installed may include but are not limited to:

- ovens
- range hoods
- sinks
- basins
- cooktops
- refrigerators

Unit context

- OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the installation of furnishing products
- Competency may be demonstrated on work sites of enterprises involved in the installation of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets

Tools and equipment may

- measuring tapes or rulers

RANGE STATEMENT	
include but not be limited to:	<ul style="list-style-type: none"> • hammers • mallets • squares • bevels • chisels • levels • plumb lobs • planes • hand saws • power saws • power planers • cordless drills • screwdrivers • power drills • explosive fixing gun • clamps • supporting devices • screwdrivers
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • timber • manufactured board • laminates • granite • marble • stainless steel • adhesives • screws • nails • masonry anchors • dowels • cavity wall fixing
Product checking is to cover:	<ul style="list-style-type: none"> • level • plumb • twirl • and alignment of doors and/or drawers
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets,

RANGE STATEMENT

	cutting lists, plans, drawings and designs <ul style="list-style-type: none"> • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures
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Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3007B Prepare and apply decorative surfaces for furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to prepare, construct and apply veneers and inlays
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare the work	1.1. Work instructions are used to determine job requirements, including: design, tolerances, process, materials, finish and quantity 1.2. Construction sequence are planned 1.3. Procedures are determined for checking quality at each stage of the process 1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.5. Suitable work area is selected for the task 1.6. Tools and equipment suitable for construction are identified and checked for safe and effective operation
2. Layout and prepare materials	2.1. Materials are selected and checked for flaws following work instructions 2.2. Materials are laid out to requirements 2.3. Suitable joining points are selected 2.4. Material is prepared for cutting
3. Construct and apply decorative surfaces	3.1. Material is cut to size and required thickness 3.2. Materials are laid out in the required design 3.3. Machinery is used in accordance with workplace procedures, including use of personal protective equipment 3.4. Items are cut to requirements 3.5. Joining process is undertaken according to workplace procedures 3.6. Adhesives are applied according to workplace procedures and/or manufacturers' instructions 3.7. Work is checked against required quality standards 3.8. Any non-conformity with the required quality standards is rectified
4. Finalise operation and maintain equipment	4.1. Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures 4.2. Machinery is cleaned and left in a safe mode 4.3. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices 4.4. Off-cuts and unused materials are collected and stored for reuse or disposal following workplace

ELEMENT	PERFORMANCE CRITERIA
	procedures 4.5. Waste and scrap materials are dealt with following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to decorative surfaces, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate preparation and application problems, avoid reworking reworking and avoid wastage
- use the limited workplace technology related to the preparation and application, including tools, equipment and measuring devices

Required knowledge

- types, characteristics, uses and limitations of decorative surfaces
- the interpretation of plan representation of furniture design
- the preparation of drawings/set-outs
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to furniture production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, tools, equipment or products
 - maintain required production output and product quality
- Prepare and apply a minimum of three different decorative surfaces to various substrates
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to plans, hand and/or power tools, equipment, materials, cauls and jigs, woodworking machinery, and a work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Decorative surfaces are to include:

- veneers and inlays

Unit context

- OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in preparation and application of decorative surfaces
- Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- knives
- mallets
- squares
- bevels
- chisels
- planes
- clamps and portable vacuum presses

Machines may include, but are not limited to:

- band saws
- mitre saws
- panel saws
- sanders
- presses and veneer guillotines

RANGE STATEMENT	
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • timber • manufactured board • veneer • brass • alloys • adhesives • perspex and decorative laminates
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3010B Select timbers for furniture production

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to select timbers for use in production by applying knowledge of timber technology
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine timber requirement	<p>1.1. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.2. Structural requirements for timbers are determined from workplace documentation</p> <p>1.3. Timber is assessed for suitability in accordance with selection criteria</p> <p>1.4. Written report is prepared substantiating selection of timber</p>
2. Evaluate timber selected	<p>2.1. Other materials which may be incorporated into furnishing item are identified and compatibility factors to be considered are recorded for inclusion in production plans</p> <p>2.2. Moisture content of timber selected is determined to ensure compliance with production requirements</p> <p>2.3. Density and working properties of timber are determined to ensure compliance with production requirements</p> <p>2.4. Any faults or features in the timber are identified and strategies are suggested to overcome/minimise their effects</p> <p>2.5. Recommendations on any changes to appropriate finishes and adhesives are recorded for inclusion in production plans</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, drawings, plans and safety procedures
- communicate ideas and information related to selection of timbers and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any wastage
- work with others and in a team by recognising dependencies and using cooperative approaches
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities, measure timber moisture content and estimate material requirements
- use pre-checking and inspection techniques to anticipate problems
- use workplace technology related to the selection of timbers, including tools, equipment, calculators and measuring devices

Required knowledge

- characteristics and uses of a range of available indigenous and overseas timber
- commonly used complementary materials and their compatibility when used in conjunction with others
- impact of climate change and workshop conditions on timbers
- timber seasoning methods, techniques and faults
- solid timber conversion techniques

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- From a range of ten common furniture species samples, identify the species correctly, match it to a specified application and justify the choice
- Correctly identify natural and seasoning faults in selected timbers
- Use a moisture meter to measure the moisture content in a minimum of three samples, including one hard and one soft timber
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Timber, moisture content measuring devices.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may, where appropriate, be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant equipment and tools, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Furnishing items include:	<ul style="list-style-type: none"> • solid timber furniture • upholstered furniture and occasional items
Unit context	<ul style="list-style-type: none"> • Work involves the selection of appropriate timbers for use in the production of furniture items • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
Timbers may include:	<ul style="list-style-type: none"> • indigenous and overseas timbers
Selection criteria may include:	<ul style="list-style-type: none"> • aesthetic appeal • shape • volumes required and characteristics
Working properties may include:	<ul style="list-style-type: none"> • hardness • strength and brittleness
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices</p>
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, prototypes, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturers' instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3011B Produce manual and computer-aided production drawings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to produce production drawings using both manual and computer-aided methods
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify object to be drawn	<p>1.1. The purposes and any operational characteristics of object to be drawn are identified</p> <p>1.2. Production materials and method are identified</p>
2. Establish drawing criteria and limitations	<p>2.1. Type of drawing to be completed is identified</p> <p>2.2. Drawing requirements are established and documented identifying dimensions, angles, shapes and finished sizes</p> <p>2.3. Drawing conventions and specifications to be noted on the drawing are identified</p> <p>2.4. Appropriate medium for drawings is identified and selected</p>
3. Quantify and draft initial drawing	<p>3.1. Dimensions are plotted from criteria and documented specifications</p> <p>3.2. Dimensional points are connected to match appropriate drawing views</p> <p>3.3. Any production notes or special requirements are noted</p> <p>3.4. Drawing conventions and specifications are noted on the documentation</p>
4. Complete drawing	<p>4.1. Angles, shapes and dimensions are checked against specifications and sample</p> <p>4.2. Adjustments are made to the drawing within scope of authority</p> <p>4.3. Drawing is checked for compliance with workplace documentation requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to drawings work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of drawing outcomes and problems
- plan and organise activities to avoid any back tracking or workflow interruptions
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow
- use mathematical ideas and techniques to correctly complete measurements, calculate area, perimeter, volume, mass, scales and ratios, and estimate material requirements
- use pre-checking techniques to anticipate drawing problems and avoid reworking
- use the limited workplace technology related to drawing tools, equipment, calculators and measuring devices

Required knowledge

- furniture design and planning criteria
- structural geometry
- measurement techniques and equipment/tools
- the theory and practice of calculations (addition, subtraction, multiplication, division)
- the types, techniques and processes of manual production drawing
- the types of computer-aided drawing equipment, software, techniques and processes
- conventional signs and markings for drawings

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical Aspects of Evidence</p>	<ul style="list-style-type: none"> • Identify the factors and criteria relevant to the drawings • Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment • Communicate effectively to enable accurate drawings • Prepare production drawings of furniture/furnishings: <ul style="list-style-type: none"> • covering a scope of at least three products • applying both manual and computer-aided techniques and processes
<p>Resource Implications</p>	<p>Information on the subjects for drawing, suitable work area appropriate to the activity, computer-aided drawing systems, measuring, calculating and recording devices.</p>
<p>Method of Assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.</p>
<p>Context of Assessment</p>	<p>Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Scope of drawing	<ul style="list-style-type: none"> • Drawing is to be limited to that used for manufacture/ production purposes and is not to encompass original design concepts • Drawing is to be completed using both manual and computer-aided design techniques and processes
Unit scope	Drawings are to be in metric scale and cover all dimensions of the furniture and furnishings
Calculations	Calculations are to be performed both manually and with the aid of a calculator
Unit context	<ul style="list-style-type: none"> • Workplace health and safety requirements may include OH&S legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
Personal protection equipment	Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Work procedures relating to production drawing • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3012B Prepare cutting list from plans and job specifications

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit applies to employees required to read plans and job specifications, and to prepare cutting lists and processing data for subsequent processing operations
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Read plans and job specifications	1.1. Job specifications, set-out rods and plans are used to determine the job requirements, including cutting list, dimension, design, quality materials and processes 1.2. Job components are established according to job specification and workplace procedures 1.3. Geometry of components are established according to specifications
2. Prepare cutting lists	2.1. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 2.2. Cutting list is checked and set out in accordance with workplace procedures and the plans and specifications 2.3. Components are identified and described using common workplace terminology 2.4. Sizes and tolerance of components are established and documented in accordance with workplace procedures 2.5. Processing requirements are identified and documented 2.6. Dimensional allowances for further processing are identified and documented
3. Read and interpret cutting lists	3.1. Cutting list is read and interpreted in accordance with the job requirements 3.2. Quantities and dimensions are interpreted 3.3. Quality standards and waste factors are considered 3.4. Processing methods are established 3.5. Processing time is identified

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to production processes, material characteristics, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, estimate cutting requirements and material requirements
- use pre-checking and inspection techniques to anticipate preparation problems, avoid reworking and avoid wastage
- use the workplace technology related to the cutting lists, including aids, tools, equipment, calculators and measuring devices

Required knowledge

- characteristics of materials and tooling used and use of products programmed
- identification of equipment, processes and procedures
- pattern techniques for optimising materials

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical Aspects of Evidence</p>	<ul style="list-style-type: none"> • Locate, interpret and apply relevant information • Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment • Identify materials and tools used in the work process • Follow work instructions, operating procedures and manufacturers' instructions to: <ul style="list-style-type: none"> • minimise the risk of injury to self and others • prevent damage to goods, equipment and products • maintain optimum production output and product quality • Interpret production plans and prepare cutting lists on a minimum of four occasions with lists each having at least ten different components and, overall, the lists incorporating four different types of material • Work effectively with others • Modify activities to cater for variations in workplace context and environment
<p>Resource Implications</p>	<p>Access to plans and specifications, standard cutting list formats, workplace standard processing procedures.</p>
<p>Method of Assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.</p>
<p>Context of Assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • This unit covers work involved in the reading of plans and specifications and the preparation of cutting lists for the production of furniture components • Preparation of cutting lists may be completed by both manual and computer assisted/generated means
Unit context	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the reading of plans and specifications and the preparation of cutting lists • Competency may be determined in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components
Materials to be considered may include but are not limited to:	<ul style="list-style-type: none"> • solid timber • manufactured board • metal • plastics • glass
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices</p>

RANGE STATEMENT	
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3013B Measure and draw site layout for manufactured furniture products

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to measure and record site layout details to provide an accurate basis for both manufacture and installation of furniture products
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Obtain measurements	<p>1.1. The purpose of obtaining measurements is clarified and confirmed</p> <p>1.2. The most appropriate method of obtaining the measurement is selected and applied</p> <p>1.3. Accurate measurements are obtained, confirmed and recorded</p> <p>1.4. Calculations required for the measurement or validation are selected and correctly applied</p> <p>1.5. Quality assurance requirements, standards and tolerances associated with enterprise operations are recognised and adhered to</p>
2. Draw site layout	<p>2.1. The intended use of the site is clarified and confirmed</p> <p>2.2. A site plan is prepared showing all features and measurements</p> <p>2.3. A site elevation is completed showing all features and measurements</p> <p>2.4. The details of the proposed furniture products, including all relevant dimensions are incorporated into the plan and elevation</p> <p>2.5. Unique and non-complying features which may impact on manufacture and/or installation are highlighted and referred to the appropriate party</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems
- plan and organise activities to avoid any back tracking or workflow interruptions
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow
- use mathematical ideas and techniques to correctly complete measurements, calculate area, perimeter, volume, mass, scales and ratios and estimate material requirements
- use pre-checking techniques to anticipate measurement and drawing problems and avoid reworking
- use workplace technology related to measurement and drawing, including tools, equipment, calculators and measuring devices

Required knowledge

- furniture design and planning criteria
- drawing techniques, technologies and processes
- furniture installation methods, criteria and techniques
- structural geometry
- measurement techniques and equipment/tools
- the theory and practice of calculations (addition, subtraction, multiplication, division)
- conventional signs and markings for plans and drawings

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical Aspects of Evidence</p>	<ul style="list-style-type: none"> • Identify the factors relevant to the measurements and drawings • Communicate effectively to enable accurate calculations, measurements and drawings • Accurately measure and record particulars for required sector sites and materials • Draw accurate, scaled plans and elevations relevant to the site using manual or computer-aided methods • Superimpose the furniture product accurately to scale onto the plan and elevation • Identify and communicate on measurements and dimensions which may impact on manufacture and/or installation
<p>Resource Implications</p>	<p>Information on the site and products for measurement and calculation, suitable work area appropriate to the activity, suitable site plans/drawings and/or specifications, and measuring, calculating and recording devices.</p>
<p>Method of Assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.</p>
<p>Context of Assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit applies to the measurement and drawing of site layout related to the manufacture and installation of furniture, cabinets, glass, soft furnishings, upholstery, picture framing, and floor covering products
Drawing	Drawing may be manual or computer aided
Measurements	Measurements are to be in metric scale, cover all dimensions of the site and furnishings and involve the use of rulers, tape measures, squares and service detectors. They may involve laser or equivalent technology
Critical dimensions that may impact on manufacture and installation include:	<ul style="list-style-type: none"> • the square of the structure • angles floor to walls • walls to ceiling • vertical walls • horizontal floor and ceiling • service locations and critical structural criteria
Calculations to include:	<ul style="list-style-type: none"> • area • perimeter • volume • mass • scales and ratios (ingredients/elements and triangulation) and require the application of addition • subtraction • multiplication and division processes • Calculations are to be performed both manually and with the aid of a calculator
Unit context	<ul style="list-style-type: none"> • Workplace health and safety requirements may include OH&S legislation, building codes, material safety management systems, hazardous substances and dangerous goods

RANGE STATEMENT	
	codes and local safe operating procedures <ul style="list-style-type: none"> • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
Personal protection equipment	Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the measuring and drawing of site layouts • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFFM3020B Set up, operate and maintain sawing machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up, operate and maintain sawing machines using their full technical potential and capacities. It encompasses and builds on the machines and tasks covered in unit <i>LMFFM2010A Set up, operate and maintain basic static machines</i>
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities 1.2. Cutting list and job specifications are read and interpreted 1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.4. Material for machining is selected and inspected for quality 1.5. Sawing machines, cutting tools and jigs are identified and checked for safe and effective operation 1.6. Procedures are determined for minimising waste material 1.7. Procedures are identified for maximising energy efficiency while completing the job
2. Set up machines	2.1. Safety equipment, including emergency stops, gauges, guards and controls are checked 2.2. Saw settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions 2.3. Trial runs are conducted to check saw operation, accuracy and quality of finished work 2.4. Necessary adjustments are made to saw settings
3. Operate machines	3.1. Saw start-up procedure is carried out in accordance with manufacturers' instructions 3.2. Material to be sawed is positioned in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures 3.3. Saw is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations 3.4. Saw operation is monitored to ensure product quality and output 3.5. Waste quantities are checked and minimised 3.6. Items that do not meet quality requirements are recycled or discarded according to workplace procedures 3.7. Problems with the required work and/or the

ELEMENT	PERFORMANCE CRITERIA
	operation of the saw are identified and reported to appropriate persons
4. Clean up work area and maintain equipment	4.1. Material that can be reused is collected and stored 4.2. Waste and scrap are removed following workplace procedures 4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures 4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace 4.5. Operator maintenance is completed in accordance with manufacturers' specifications and site procedures 4.6. Tooling is maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to sawing operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate saw depths and estimate material requirements
- use pre-checking and inspection techniques to anticipate sawing problems, avoid reworking and avoid wastage
- use the workplace technology related to sawing, including tools, equipment and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of sawing machines
- sawing processes and techniques
- characteristics of materials and uses of products produced
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Read and interpret cutting lists and job specifications to prepare for work
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Identify, set up, operate and maintain at least four different types of saws, which must include those stipulated in the Range Statement and cover the use of safety cut-outs and guards
- Conduct operator maintenance on the machines and related equipment
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to sawing machinery as identified in the Range Statement, standard operating procedures, and unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace

EVIDENCE GUIDE	
	simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Sawing machines are to include:</p>	<ul style="list-style-type: none"> • cross-cut saws • circular rip saws • sliding table panel saws and scroll-band saws and may include: NC beam saws • wall saws • band resaws and straight line edgers
<p>Material to be machined is to include:</p>	<ul style="list-style-type: none"> • solid timber and manufactured board and may include: laminates • plastics • acrylics • synthetic solids
<p>Unit scope</p>	<p>Work involves reading and interpreting plans, deep ripping, cutting angles and compound angles, trenching flat panel components, shaping components, using jigs and fixtures, breaking down boards, maintaining machine parts and saw blades</p>
<p>Unit context</p>	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines • Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom

RANGE STATEMENT	
	cabinets and/or furniture components
Tools and equipment are to include:	<ul style="list-style-type: none"> • machine-specific tools and may include: screwdrivers • hammers • spanners • jigs and fixtures
Materials are to include:	<ul style="list-style-type: none"> • sawing machine consumables • oils and lubricants and trial materials
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFFM3021B Set up, operate and maintain drilling machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up, operate and maintain drilling machines using their full technical potential and capacities. It encompasses and builds on the drilling machines and tasks covered in unit <i>LMFFM2010A Set up, operate and maintain basic static machines</i>
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities</p> <p>1.2. Cutting list and job specifications are read and interpreted</p> <p>1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.4. Material for machining is selected and inspected for quality</p> <p>1.5. Drilling machines, cutting tools and jigs are identified and checked for safe and effective operation</p> <p>1.6. Procedures are determined for minimising waste material</p> <p>1.7. Procedures are identified for maximising energy efficiency while completing the job</p>
2. Set up machines	<p>2.1. Safety equipment, including emergency stops, gauges, guards and controls are checked</p> <p>2.2. Drill settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions</p> <p>2.3. Trial runs are conducted to check drill operation, accuracy and quality of finished work</p> <p>2.4. Necessary adjustments are made to drill settings</p>
3. Operate machines	<p>3.1. Drill start-up procedure is carried out in accordance with manufacturers' instructions</p> <p>3.2. Material to be drilled is positioned in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures</p> <p>3.3. Drill is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations</p> <p>3.4. Drill operation is monitored to ensure product quality and output</p> <p>3.5. Items that do not meet quality requirements are recycled or discarded according to workplace procedures</p> <p>3.6. Problems with the required work and/or the</p>

ELEMENT	PERFORMANCE CRITERIA
	operation of the drill are identified and reported to appropriate persons
4. Clean up work area and maintain equipment	4.1. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures 4.2. Unserviceable equipment is tagged and faults identified in accordance with workplace 4.3. Operator maintenance is completed in accordance with manufacturers' specifications and site procedures 4.4. Tooling is maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to drilling operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate drill depths and estimate material requirements
- use pre-checking and inspection techniques to anticipate drilling problems, avoid reworking and avoid wastage
- use the workplace technology related to drilling, including tools, equipment and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of drilling machines
- drilling processes and techniques
- characteristics of materials and uses of products produced
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Read and interpret cutting lists and job specifications to prepare for work
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Identify, set up and operate at least the two different types of drills, a single-head multi-spindle machine and at least one other from the Range Statement (including the use of safety cut-outs and guards), and their application to a variety of materials
- Conduct operator maintenance on the machines and associated equipment
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to drilling machinery as identified in the Range Statement, standard operating procedures, and unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

EVIDENCE GUIDE	
Context of Assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Drilling machines are to include:</p>	<ul style="list-style-type: none"> • single-head multi-spindle machines and may include: single-head • single-spindle vertical and horizontal machines and multi-head multi-spindle machines
<p>Material to be machined may include but is not limited to:</p>	<ul style="list-style-type: none"> • solid timber • manufactured board • metal • glass
<p>Unit scope</p>	<p>Work involves reading and interpreting working drawing and manufacturers' hardware specification, drilling pattern selection, cutter fitting to meet job specification and the adjustment and use of pressures and stops</p>
<p>Unit context</p>	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines • Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components
<p>Tools and equipment are to include machine-specific tools and may include, but not be</p>	<ul style="list-style-type: none"> • screwdrivers • hammers • spanners

RANGE STATEMENT	
limited to:	<ul style="list-style-type: none"> • jigs and fixtures
Materials are to include:	<ul style="list-style-type: none"> • drilling machine consumables • oils and lubricants and trial materials
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFFM3022B Set up, operate and maintain joining machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up, operate and maintain joining machines using their full potential and capacities in the production of furniture
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities 1.2. Cutting list and job specifications are read and interpreted 1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.4. Material for machining is selected and inspected for quality 1.5. Joining machines, cutting tools and jigs are identified and checked for safe and effective operation 1.6. Procedures are determined for minimising waste material 1.7. Procedures are identified for maximising energy efficiency while completing the job
2. Set up machines	2.1. Safety equipment, including emergency stops, gauges, guards and controls are checked 2.2. Joining machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions 2.3. Trial runs are conducted to check machine operation, accuracy and quality of finished work 2.4. Necessary adjustments are made to machine settings
3. Operate machines	3.1. Machine start-up procedure is carried out in accordance with manufacturers' instructions 3.2. Material is fed into machine in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures 3.3. Machine is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations 3.4. Machine operation is monitored to ensure product quality and output 3.5. Waste quantities are checked and minimised 3.6. Items that do not meet quality requirements are recycled or discarded according to workplace procedures 3.7. Problems with the required work and/or the

ELEMENT	PERFORMANCE CRITERIA
	operation of the machine are identified and reported to appropriate persons
4. Clean up work area and maintain equipment	4.1. Material that can be reused is collected and stored 4.2. Waste and scrap are removed following workplace procedures 4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures 4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace 4.5. Operator maintenance is completed in accordance with manufacturers' specifications and site procedures 4.6. Tooling is maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to joining operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate joining problems, avoid reworking and avoid wastage
- use the workplace technology related to joining, including tools, equipment, calculators and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of joining machines
- joining processes and techniques
- characteristics of materials and uses of products produced
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Read and interpret cutting lists and job specifications to prepare for work
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage and wastage of goods, equipment and products
 - maintain required production output and product quality
- Identify, set up, operate to their full capacities at least two different types of joining machines (mortise and tenoner and dovetailer), including the use of safety cut-outs and guards and their application of the machines to a variety of materials
- Conduct operator maintenance on the machines and related equipment
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to joining machinery as identified in the Range Statement, standard operating procedures, and unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

EVIDENCE GUIDE	
Context of Assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Joining machines are to include:</p>	<ul style="list-style-type: none"> mortise and tenoners (either joinery or furniture) and dovetailers (single or multi-pin) and may include: dowelling and inserting machines
<p>Material to be machined may include but is not limited to:</p>	<ul style="list-style-type: none"> solid timber and manufactured board
<p>Unit scope</p>	<p>Work involves reading and interpreting working drawings, machining mortise and tenon joints, dovetailing, scribed joints, angle joints and compound angle joints, and the maintenance of tools and cutters</p>
<p>Unit context</p>	<ul style="list-style-type: none"> OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components
<p>Tools and equipment are to include:</p>	<ul style="list-style-type: none"> machine-specific tools and tension wrenches and may include: screwdrivers hammers spanners jigs and fixtures

RANGE STATEMENT	
Materials are to include:	<ul style="list-style-type: none"> • joining machine consumables • oils and lubricants and trial materials
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3023B Set up, operate and maintain planing and finishing machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up, operate and maintain planing and finishing machines using their full potential and capacities in the production of furniture. It encompasses and builds on the machines and tasks covered in unit <i>LMFFM2010A, Set up, operate and maintain basic static machines</i>
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities 1.2. Cutting list and job specifications are read and interpreted 1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.4. Material for machining is selected and inspected for quality 1.5. Planing and finishing machines, cutting tools and jigs are identified and checked for safe and effective operation 1.6. Procedures are determined for minimising waste material 1.7. Procedures are identified for maximising energy efficiency while completing the job
2. Set up machines	2.1. Safety equipment, including emergency stops, gauges, guards and controls are checked 2.2. Planing and finishing machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions 2.3. Trial runs are conducted to check machine operation, accuracy and quality of finished work 2.4. Necessary adjustments are made to machine settings
3. Operate machines	3.1. Machine start-up procedure is carried out in accordance with manufacturers' instructions 3.2. Material is fed into machine in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures 3.3. Machine is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations 3.4. Machine operation is monitored to ensure product quality and output 3.5. Items that do not meet quality requirements are recycled or discarded according to workplace procedures

ELEMENT	PERFORMANCE CRITERIA
	3.6. Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons
4. Clean up work area and maintain equipment	4.1. Material that can be reused is collected and stored 4.2. Waste and scrap are removed following workplace procedures 4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures 4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace 4.5. Operator maintenance is completed in accordance with manufacturers' specifications and site procedures 4.6. Tooling is maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to planing and finishing operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate planing and finishing problems, avoid reworking and avoid wastage
- use the workplace technology related to planing and finishing, including tools, equipment, calculators and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of planing and finishing machines
- planing and finishing processes and techniques
- characteristics of materials and uses of products produced
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Read and interpret cutting lists and job specifications to prepare for work
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage and wastage of goods, equipment and products
 - maintain required production output and product quality
- Identify, set up and operate to their full capabilities, at least three different types of planing and finishing machines which are to include:
 - a surface planer
 - a panel planer, and
 - a wide belt sander
- Conduct operator maintenance on machines and related equipment and materials
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to planing and finishing machinery as identified in the Range Statement, standard operating procedures, and unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be

EVIDENCE GUIDE	
	in conjunction with assessment of other units of competency.
Context of Assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Machines are to include:</p>	<ul style="list-style-type: none"> • surface planer • panel planer and wide belt sander and may include: multi-drum sander • planer sander and over and under machines
<p>Material to be machined may include:</p>	<ul style="list-style-type: none"> • solid timber and manufactured board
<p>Unit scope</p>	<p>Work involves changing and monitoring straight cutters and knives, setting pressures, chip breaker and fences, changing abrasive belts and adjusting pressures, feed and belt tracking devices</p>
<p>Unit context</p>	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines • Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components
<p>Tools and equipment are to include:</p>	<ul style="list-style-type: none"> • machine-specific tools and tension wrenches and may include: screwdrivers • hammers • spanners • jigs and fixtures

RANGE STATEMENT	
Materials are to include:	<ul style="list-style-type: none"> • planing and finishing machine consumables • oils and lubricants and trial materials
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3024B Set up, operate and maintain multi-head planing and moulding machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up, operate and maintain multi-head planing and moulding machines using their full potential and capacities in the production of furniture. It encompasses and builds on other machines and tasks covered in unit <i>LMFFM2010A, Set up, operate and maintain basic static machines</i>
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities 1.2. Job specifications are read and interpreted 1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.4. Material for machining is selected and inspected for quality 1.5. Machines and cutting tools are identified and checked for safe and effective operation 1.6. Procedures are determined for minimising waste material 1.7. Procedures are identified for maximising energy efficiency while completing the job
2. Set up machines	2.1. Safety equipment, including emergency stops, gauges, guards and controls, are checked 2.2. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions 2.3. Trial runs are conducted to check machine operation, accuracy and quality of finished work 2.4. Necessary adjustments are made to machine settings
3. Operate machines	3.1. Machine start-up procedure is carried out in accordance with manufacturers' instructions 3.2. Material is fed into machine in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures 3.3. Machine is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations 3.4. Machine operation is monitored to ensure product quality and output 3.5. Items that do not meet quality requirements are recycled or discarded according to workplace procedures 3.6. Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons

ELEMENT	PERFORMANCE CRITERIA
4. Clean up work area and maintain equipment	4.1. Material that can be reused is collected and stored 4.2. Waste and scrap are removed following workplace procedures 4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures 4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace 4.5. Operator maintenance is completed in accordance with manufacturers' specifications and site procedures 4.6. Tooling is maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to planing and moulding operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate planing and moulding problems, avoid reworking and avoid wastage
- use the workplace technology related to planing and moulding, including tools, equipment, calculators and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of planing and moulding machines
- planing and moulding processes and techniques
- characteristics of materials and uses of products produced
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Read and interpret cutting lists and job specifications to prepare for work
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage and wastage of goods, equipment and products
 - maintain required production output and product quality
- Identify, set up, operate and maintain multi-headed planing and moulding machine, including the use of safety cut-outs and guards, to complete the following:
 - square dress timber
 - produce a minimum range of three detailed mouldings profiled on at least one edge and one face to a minimum of Australian Standards criteria
- Conduct operator maintenance on the machine
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to a planing and moulding machine as identified in the Range Statement, standard operating procedures, and unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be

EVIDENCE GUIDE	
	in conjunction with assessment of other units of competency.
Context of Assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Machines are to include:</p>	<ul style="list-style-type: none"> • through and push feed planing and moulding machines <p>Materials to be machined are to include solid timber and may include manufactured board</p>
<p>Unit scope</p>	<p>Work involves changing and maintaining straight and profile knives, setting pressures, adjusting feed speeds, chip breakers, fences and guides, square dressing and producing detailed mouldings</p>
<p>Unit context</p>	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines • Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components
<p>Tools and equipment are to include machine-specific tools and may include, but not be limited to:</p>	<ul style="list-style-type: none"> • tension wrenches • screwdrivers • hammers and spanners
<p>Materials are to include:</p>	<ul style="list-style-type: none"> • planing and moulding machine consumables • oils and lubricants and trial materials
<p>Personal protective equipment</p>	<p>Personal protective equipment is to include that</p>

RANGE STATEMENT	
	prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3025B Set up, operate and maintain routing and shaping machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up, operate and maintain routing and shaping machines using their full potential and capacities in the production of furniture
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities 1.2. Cutting list and job specifications are read and interpreted 1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.4. Material for machining is selected and inspected for quality 1.5. Routing and shaping machines, cutting tools and jigs are identified and checked for safe and effective operation 1.6. Procedures are determined for minimising waste material 1.7. Procedures are identified for maximising energy efficiency while completing the job
2. Set up machines	2.1. Safety equipment, including emergency stops, gauges, guards and controls are checked 2.2. Routing and shaping machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions 2.3. Trial runs are conducted to check machine operation, accuracy and quality of finished work 2.4. Necessary adjustments are made to machine settings
3. Operate machines	3.1. Machine start-up procedure is carried out in accordance with manufacturers' instructions 3.2. Material is fed into machine in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures 3.3. Machine is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations 3.4. Machine operation is monitored to ensure product quality and output 3.5. Items that do not meet quality requirements are recycled or discarded according to workplace procedures

ELEMENT	PERFORMANCE CRITERIA
	3.6. Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons
4. Clean up work area and maintain equipment	4.1. Material that can be reused is collected and stored 4.2. Waste and scrap are removed following workplace procedures 4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures 4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace 4.5. Operator maintenance is completed in accordance with manufacturers' specifications and site procedures 4.6. Tooling is maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to routing and shaping operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate routing and shaping problems, avoid reworking and avoid wastage
- use the workplace technology related to routing and shaping, including tools, equipment, calculators and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of routing and shaping machines
- routing and shaping processes and techniques
- characteristics of materials and uses of products produced
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Read and interpret cutting lists and job specifications to prepare for work
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage and wastage of goods, equipment and products
 - maintain required production output and product quality
- Identify, set up and operate to their full capabilities, at least two different types of routing and shaping machines, as specified in the Range Statement, including the use of safety cut-outs and guards
- Conduct operator maintenance on the machines and related equipment/material
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to routing and shaping machinery as identified in the Range Statement, standard operating procedures, and unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

EVIDENCE GUIDE	
Context of Assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Routing and shaping machines are to include:</p>	<ul style="list-style-type: none"> spindle moulding machine and overhead or inverted pin routing machine
<p>Material to be routed and shaped may include:</p>	<ul style="list-style-type: none"> solid timber manufactured board plastics and laminates
<p>Unit scope</p>	<p>Work involves setting up fences and guides, maintaining cutters, selecting feed and spindle speeds, the use of feed unit, safety pressure devices/ guards, linear, convex and concave shaping, rebating, moulding and grooving material and using jigs and fixtures</p>
<p>Unit context</p>	<ul style="list-style-type: none"> OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components
<p>Tools and equipment are to include:</p>	<ul style="list-style-type: none"> machine-specific tools and may include screwdrivers hammers spanners jigs and fixtures

RANGE STATEMENT	
Materials are to include:	<ul style="list-style-type: none"> • routing and shaping machine consumables • oils and lubricants and trial materials
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3026B Set up, operate and maintain mechanical wood turning lathes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up, operate and maintain mechanical wood turning lathes used in the production of furniture
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including design, quality, materials, equipment, and quantities 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Material for turning is selected and inspected for quality 1.4. Machines, cutting tools and templates are identified and checked for safe and effective operation 1.5. Procedures are determined for minimising waste material 1.6. Procedures are identified for maximising energy efficiency while completing the job
2. Set up machines	2.1. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions 2.2. Trial runs are conducted to check machine operation, accuracy and quality of finished work 2.3. Necessary adjustments are made to machine settings
3. Operate machines	3.1. Machine start-up procedure is carried out in accordance with manufacturers' instructions 3.2. Material is fed into machine in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures 3.3. Machine is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations 3.4. Machine operation is monitored to ensure product quality and output 3.5. Waste quantities are checked and minimised 3.6. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures 3.7. Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons
4. Clean up work area and maintain	4.1. Material that can be reused is collected and stored 4.2. Waste and scrap are removed following workplace

ELEMENT	PERFORMANCE CRITERIA
equipment	procedures 4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures 4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace 4.5. Operator maintenance is completed in accordance with manufacturers' specifications and site procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to lathe operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate set-up, operating and maintenance problems, avoid reworking and avoid wastage
- use the limited workplace technology related to lathe operations, including tools, equipment, calculators and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of lathes
- characteristics of materials and uses of products produced
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Read and interpret cutting lists and job specifications to prepare for work
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Identify, set up, operate and maintain at least two different lathes, including the use of safety cut-outs and guards, to complete the following:
 - off-hand grind a range of cutters
 - manufacture and apply a template
 - complete a minimum of two detailed turnings which are to include fillets, beads, covers and square shoulder
- Conduct operator maintenance on the lathes
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to the lathes as identified in the Range Statement, standard operating procedures, and unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be

EVIDENCE GUIDE	
	in conjunction with assessment of other units of competency.
Context of Assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Lathes are to include:	<ul style="list-style-type: none"> • two of fixed knife • rotary knife and copying lathe
Unit scope	Work involves reading the plans and specifications, the manufacture of templates, the free-hand grinding of cutters, the application of cutting tools and the set-up and operation of lathes to produce turned components
Unit context	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines • Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components
Tools are to include machine-specific tools and may include:	<ul style="list-style-type: none"> • tension wrench • pedestal grinder or bench grinder
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment

RANGE STATEMENT

	<ul style="list-style-type: none"> • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures
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Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3027B Set up, operate and maintain automated edge banding machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up, operate and maintain edge banding machines which use automated processes to apply and finish edge treatments
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including quality, materials, equipment, and quantities 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Material for processing is selected and inspected for quality 1.4. Machines and cutting tools are identified and checked for safe and effective operation 1.5. Procedures are determined for minimising waste material 1.6. Procedures are identified for maximising energy efficiency while completing the job
2. Set up machines	2.1. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions 2.2. Trial runs are conducted to check machine operation, accuracy and quality of finished work 2.3. Necessary adjustments are made to machine settings
3. Operate machines	3.1. Machine start-up procedure is carried out in accordance with manufacturers' instructions 3.2. Material is fed into machine in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures 3.3. Machine is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations 3.4. Machine operation is monitored to ensure product quality and output 3.5. Waste quantities are checked and minimised 3.6. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures 3.7. Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons
4. Clean up work area and maintain	4.1. Material that can be reused is collected and stored 4.2. Waste and scrap are removed following workplace

ELEMENT	PERFORMANCE CRITERIA
equipment	procedures 4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures 4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace 4.5. Operator maintenance is completed in accordance with manufacturers' specifications and site procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to automated edge banding machine operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate set-up, operating and maintenance problems, avoid reworking and avoid wastage
- use the limited workplace technology related to automated edge banding machines, including tools, equipment, calculators and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of machines
- characteristics, uses and limitations of board products, edging products and adhesives
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Read and interpret cutting lists and job specifications to prepare for work
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Identify, set up and operate an automated (not fully automatic) edging machine to complete the following:
 - the set-up and application of at least three different edge treatment materials
 - the identification and correction of at least two real or simulated machining faults
- Conduct operator maintenance on the machines and equipment
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to an automated edge banding machine, standard operating procedures, and unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of

EVIDENCE GUIDE	
	competency.
Context of Assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Automated edge banding machines</p>	<p>Automated edge banding machines are those which use automated processes to apply and finish edge treatments</p> <p>Machines are to include a standard automated edger (not fully automatic) and may include a soft forming machine</p>
<p>Unit scope</p>	<p>Work involves applying and processing an edge trim to a manufactured board</p>
<p>Unit context</p>	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines • Competency may be demonstrated in workplaces involved in the manufacture of domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components
<p>Material to be processed may include but is not limited to:</p>	<ul style="list-style-type: none"> • solid timber and manufactured board
<p>Edgings may include, but not be limited to:</p>	<ul style="list-style-type: none"> • solid timber • laminates • plastics • non-ferrous materials and foils

RANGE STATEMENT	
Operator maintenance	Operator maintenance is to include the cleaning and refurbishing of the gluing station
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3028B Fabricate synthetic solid surface products

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to fabricate synthetic solid surface furniture and furnishing products
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including design, tolerances, process, materials, finish and quantity 1.2. Fabrication sequence are planned 1.3. Procedures are determined for checking quality at each stage of the process 1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.5. Suitable work area is selected for the task 1.6. Preparatory drawings and set-outs for tasks are completed 1.7. Cutting list for components is developed 1.8. Materials are selected following work instructions 1.9. Tools and equipment suitable for fabrication are identified and checked for safe and effective operation
2. Complete fabrication	2.1. Materials are set out and prepared according to work instructions and components are marked according to industry practices 2.2. Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications 2.3. Components are fabricated and checked against set-outs for accuracy tolerances, fit and distortion 2.4. Doors, drawers, shelves or decorative treatments are fitted as required 2.5. Product is prepared for final finish, including the removal of bruises, scratches, dents and marks 2.6. Product is checked against plans at identified checkpoints
3. Finalise operation	3.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices 3.2. Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures 3.3. Off-cuts and unused materials are collected and stored for reuse or disposed following workplace procedures 3.4. Waste and scrap materials are dealt with following

ELEMENT	PERFORMANCE CRITERIA
	workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to synthetic solid surface materials, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate fabrication problems, avoid reworking and avoid wastage
- use the limited workplace technology related to fabrication, including tools, equipment and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of synthetic solid surface materials
- the interpretation of plan representation of furniture design
- the preparation of drawings and set-outs
- identification of hand and/or power tools, materials, machines, equipment, processes and procedures
- workflow in relation to furniture production

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical Aspects of Evidence</p>	<ul style="list-style-type: none"> • Interpret work order and locate and apply relevant information • Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment • Follow work instructions, operating procedures and inspection processes to: <ul style="list-style-type: none"> • minimise the risk of injury to self or others • prevent damage to goods, equipment or products • maintain required production output and product quality • Fabricate a minimum of three synthetic solid surface material products, including at least one full benchtop • Work effectively with others • Modify activities to cater for variations in workplace context and environment
<p>Resource Implications</p>	<p>Access to plans, hand and/or power tools, machines, equipment, materials, and a work area.</p>
<p>Method of Assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.</p>
<p>Context of Assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Synthetic solid surface products	<ul style="list-style-type: none"> • Synthetic solid surface products are generally acrylic or polyester sheet based materials • There are a range of commercially licensed products, including Corian, Aztec, Trezzini and others
Synthetic solid surface products are to include benchtops and may include:	<ul style="list-style-type: none"> • edges • sinks • bowls • other containers and waterproof wall treatments
Unit context	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work involves reading and interpreting plans, developing set-outs, using hand and/or power tools, equipment and operating machinery
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • measuring tapes or rulers • hammers • mallets • squares • bevels • chisels • planes • hand saws • power saws • power drills/screwdrivers • air compressor and hoses • clamps

RANGE STATEMENT	
	<ul style="list-style-type: none"> • screwdrivers • pincers
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • panel saws • routers • edge moulders • point to point • heat applicators • sanding and buffing machines
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • synthetic solid surface materials • timber • manufactured board • glues • screws • nails • dowels • knockdown fittings
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3030B Set up, operate and maintain CNC sizing machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up, operate and maintain CNC sizing machines to produce furniture or components
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including: design, quality, materials, equipment and quantities 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Material for machining is selected and inspected for appropriate quality 1.4. Procedures are determined for minimising waste material 1.5. Procedures are identified for maximising energy efficiency while completing the job
2. Set up machines	2.1. CNC program is set to job requirements 2.2. Safety equipment, including emergency stops, gauges, guards and controls are checked 2.3. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturers' instructions 2.4. Machines, cutting tools and jigs are checked for safe and effective operation 2.5. Trial runs are conducted to check machine operation and quality of finished work 2.6. Final adjustments are made to CNC programs and equipment according to workplace procedures
3. Operate machines	3.1. Machines are operated and monitored to ensure product quality and output 3.2. Waste quantities are checked and minimised 3.3. Problems with the required work are identified and reported to appropriate persons 3.4. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures 3.5. Any authorised changes in working procedures are followed
4. Clean up work area and maintain equipment	4.1. Material that can be reused is collected and stored 4.2. Waste and scrap are removed following workplace procedures 4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with

ELEMENT	PERFORMANCE CRITERIA
	<p>workplace procedures</p> <p>4.4. Operator maintenance is completed in accordance with manufacturers' specifications and site procedures</p> <p>4.5. Unserviceable equipment is tagged and faults identified in accordance with workplace</p> <p>4.6. Equipment and tooling is maintained in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to CNC sizing operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, compute input data and estimate material requirements
- use pre-checking and inspection techniques to anticipate CNC sizing problems, avoid reworking and avoid wastage
- use the workplace technology related to CNC sizing, including machinery, tools, equipment and measuring devices

Required knowledge

- types, characteristics, uses and limitations of CNC sizing machines
- CNC theory, practices and techniques
- characteristics of materials used and uses of products produced
- workflow processes
- procedures for reporting materials, product or equipment faults

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Locate, interpret and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment or products
 - maintain required production output and product quality
- Identify, set up and operate CNC sizing equipment, including the use of safety cut-outs and guards, to produce a range of complex cutting patterns to its full potential
- Conduct operator maintenance on the machine and related equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

CNC controlled equipment, standard operating procedures, unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
CNC sizing machines	CNC sizing machines are to include CNC beam saws and may include double end profiling machines
Unit scope	Work involves computer programming skills, reading and interpreting drawings, stock control, setting cutting speeds, computer-aided machining operations, saw and tool maintenance
Material to be sized is to include:	<ul style="list-style-type: none"> • solid timber • manufactured board • laminate • solid synthetic materials and plastics
Unit context	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines • Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components
Tools	Tools are to include machine-specific tools and may include screwdrivers, hammers and spanners
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and

RANGE STATEMENT	
	enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3031B Set up, operate and maintain CNC machining and processing centres

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up, operate and maintain CNC machining and processing centres to produce furniture or components
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including: design, quality, materials, equipment and quantities 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Material for machining is selected and inspected for appropriate quality 1.4. Procedures are determined for minimising waste material 1.5. Procedures are identified for maximising energy efficiency while completing the job
2. Set up for machining and processing	2.1. CNC program is set to job requirements 2.2. Safety equipment, including emergency stops, gauges, guards and controls are checked 2.3. Machining and processing settings and adjustments are made in accordance with job requirements and machining and processing and tool manufacturers' instructions 2.4. Machining and processing, cutting tools and jigs are checked for safe and effective operation 2.5. Trial runs are conducted to check machining and processing operation and quality of finished work 2.6. Final adjustments are made to CNC programs and equipment according to workplace procedures
3. Operate machining and processing centres	3.1. Machining and processing centres are operated and monitored to ensure product quality and output 3.2. Waste quantities are checked and minimised 3.3. Problems with the required work are identified and reported to appropriate persons 3.4. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures 3.5. Any authorised changes in working procedures are followed
4. Clean up work area and maintain equipment	4.1. Material that can be reused is collected and stored 4.2. Waste and scrap are removed following workplace procedures 4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with

ELEMENT	PERFORMANCE CRITERIA
	<p>workplace procedures</p> <p>4.4. Operator maintenance is completed in accordance with manufacturers' specifications and site procedures</p> <p>4.5. Unserviceable equipment is tagged and faults identified in accordance with workplace</p> <p>4.6. Equipment and tooling is maintained in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to CNC machining and processing centre operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, compute input data and estimate material requirements
- use pre-checking and inspection techniques to anticipate CNC machining and processing centre problems, avoid reworking and avoid wastage
- use the workplace technology related to CNC machining and processing centre, including machining and processing, tools, equipment and measuring devices

Required knowledge

- types, characteristics, uses and limitations of CNC machining and processing centres
- CNC theory, practices and techniques
- characteristics of materials used and uses of products produced
- workflow processes
- procedures for reporting materials, product or equipment faults

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Locate, interpret and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment or products
 - maintain required production output and product quality
- Identify, set up and operate CNC machining and processing centre equipment to complete detailed profiling, including:
 - development and application of sub-program
 - development and application of parametric program, and
 - application of CAD/CAM functions
- Conduct operator maintenance on the machining and processing centre equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

CNC controlled equipment, standard operating procedures, unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment,

EVIDENCE GUIDE

	materials, work instructions and deadlines.
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Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>CNC machining and processing centres are to include three axis machining centre and may include:</p>	<ul style="list-style-type: none"> • multi-tasking machining centres • flat-bed routers and mortiser
<p>Material to be machined and processed is to include:</p>	<ul style="list-style-type: none"> • solid timber and manufactured board
<p>Unit scope</p>	<p>Work involves reading and interpreting drawings, selecting and installing tooling, setting jigs and fixtures, programming skills (sub-programs and parametrics), performance of CAM functions, downloading and storage of data to complete detailed profiling and other specified operations</p>
<p>Unit context</p>	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machining and processing centres • Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components
<p>Tools and equipment are to include:</p>	<ul style="list-style-type: none"> • stand-alone or integral computing systems and machine-specific tools

RANGE STATEMENT	
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3032B Produce and maintain cutting tools

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to select and machine materials, to produce and maintain profile knives, and to maintain router cutters, straight knives and profile cutter heads used in woodworking machinery
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including development, quality, materials, equipment, and quantities 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Material for machining is selected and inspected for quality 1.4. Machines, grinding tools and accessories are identified and checked for safe and effective operation 1.5. Procedures are determined for minimising waste material 1.6. Procedures are identified for maximising energy efficiency while completing the job
2. Set up machines	2.1. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions 2.2. Grinding operations are checked for accuracy and quality of finished work 2.3. Necessary adjustments are made to machine settings
3. Operate machines	3.1. Machine start-up procedure is carried out in accordance with manufacturers' instructions 3.2. Tooling is machined in accordance with manufacturers' instructions, safe handling procedures and standard workplace operating procedures 3.3. Machine is operated in accordance with its designed capacity and purpose, and to manufacturers' recommendations 3.4. Machine operation is monitored to ensure product quality and output 3.5. Waste quantities are checked and minimised 3.6. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures 3.7. Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons 3.8. Daily routine lubrication and adjustments to the machines are made

ELEMENT	PERFORMANCE CRITERIA
4. Clean up work area and maintain equipment	4.1. Material that can be reused is collected and stored 4.2. Waste and scrap are removed following workplace procedures 4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures 4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace 4.5. Operator maintenance is completed in accordance with manufacturers' specifications and site procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to cutting tool operations, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate production and maintenance problems, avoid reworking and avoid wastage
- use the limited workplace technology related to cutting tool operations, including tools, equipment and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of grinding machines
- cutter development geometry and principles
- characteristics, properties and limitations of cutter steels
- grinding practices and techniques
- types, characteristics and limitations of grinding adhesives and processes
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Read and interpret cutting lists and job specifications to prepare for work
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection processes to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete the following:
 - develop and produce a set of two matching profile cutters, and
 - produce a set of profile cutters from a template the candidate has manufactured, or
 - maintain a router cutter and solid profile cutter head
- Conduct operator maintenance on the machines/ equipment
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to grinding machinery as identified in the Range Statement, standard operating procedures, and unprocessed materials.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be

EVIDENCE GUIDE	
	in conjunction with assessment of other units of competency.
Context of Assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Machines are to include:	<ul style="list-style-type: none"> either a tool and cutter grinder or a profile grinder and also may include: a straight knife grinder and a bench or pedestal grinder
Unit scope	<p>The work involves the identification of cutter design requirements, the geometrical development of cutter profiles, the inspection and identification of maintenance requirements, the selection and matching of abrasives for job requirements, the production of templates, the production and maintenance of detailed cutter profiles and the maintenance of straight cutters for a range of woodworking machines</p>
Unit context	<ul style="list-style-type: none"> OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines
Materials are to include:	<ul style="list-style-type: none"> high speed steel and tungsten carbide and may include other combination materials
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices</p>
Information and procedures	<ul style="list-style-type: none"> Workplace procedures relating to the use of tools and equipment Work instructions, including job sheets, cutting lists, plans, drawings and designs

RANGE STATEMENT

	<ul style="list-style-type: none"> • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures
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Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM3033B Construct jigs and fixtures

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to prepare and construct jigs and fixtures to produce furniture components
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify the purpose of the jig or fixture	1.1. Purpose of the jig or fixture and the equipment it is to be used on is established 1.2. Proposed service life of jig or fixture is established 1.3. Tolerances allowed are identified 1.4. Materials for jig construction are established 1.5. Quality requirements for each stage of the construction process are identified
2. Plan jig or fixture construction	2.1. Plan of proposed jig or fixture is produced 2.2. Approval of design is gained through workplace procedures 2.3. Steps or stages in production are planned, noting check points for measurements and tests
3. Collect materials and equipment	3.1. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 3.2. Sufficient materials to complete the project are assembled ready for use 3.3. Suitable work area is selected 3.4. Hand and/or power tools are identified and checked for serviceability and assembled in work area 3.5. Appropriate equipment required is identified and checked for serviceability
4. Construct the jig or fixture	4.1. Production plan is followed to construct the jig or fixture 4.2. Tools and equipment are used in accordance with workplace procedures 4.3. Quality checks are conducted at the identified points 4.4. Modifications are identified and recommended within workplace procedures 4.5. Modifications to the plan are documented and followed 4.6. Jig or fixture is checked for fitness for purpose
5. Clean up work area and maintain equipment	5.1. Any faulty and/or defective equipment is isolated and reported to appropriate persons 5.2. Material which can be reused is collected and stored 5.3. Waste and scrap are removed following workplace procedures 5.4. All tools, equipment and personal protective equipment are cleaned, maintained and appropriately

ELEMENT	PERFORMANCE CRITERIA
	stored 5.5. Work area is cleaned in accordance with workplace procedures

Required Skills and Knowledge

Required knowledge

- types, characteristics, uses and limitations of jigs and fixtures
- criteria for selecting material for use in jigs and fixtures
- requirements for cutting, shaping and joining materials
- identification of equipment, processes and procedures
- workflow in relation to the use of jigs and fixtures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order and locate and apply information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify materials used in the work process
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, tools, equipment or products
 - maintain required production output and product quality
- The selection of materials and the construction of a minimum of three different types of jigs/fixtures, including one for a shaping machine and one which is adjustable
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Job context, materials and equipment for jig or fixture construction.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Machines for which jigs and fixtures are made may include, but are not limited to:

- band saws
- cross cut saws
- jig saws
- mitre saws
- panel and rip saws
- belt sanders
- panel planers
- surface planers
- horizontal borers
- vertical drill presses
- mortisers
- tenoners
- spindle moulders
- overhead and inverted pin routing machines

The uses for jigs and fixtures may include, but are not limited to:

- holding
- shaping
- drilling
- cutting
- routing

Jigs and fixtures are used in the production of, but are not limited to:

- chair legs
- shaping curved components
- end panels
- trenching
- grooving

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- bevels
- chisels
- planes
- hand saws

RANGE STATEMENT	
	<ul style="list-style-type: none"> • power saws • power drills/screwdrivers • pneumatic tools • clamps • screwdrivers • pincers
Unit context	<ul style="list-style-type: none"> • OH&S requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines • Competency may be demonstrated in workplaces involved in the manufacture of solid timber furniture, domestic furniture, commercial furniture, kitchen and bathroom cabinets and/or furniture components
Material used in the construction of jigs and fixtures may include, but is not limited to:	<ul style="list-style-type: none"> • solid timber • manufactured board • metal • plastics • synthetic solids • laminates and non-ferrous materials
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFM4005A Hand carve wood to custom design

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This unit covers the competency to confirm the design requirements, select the wood, hand carve it to custom design and prepare the carving for finishing.

Application of the Unit

Application of the unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furniture maker operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at the highly skilled craftsman or artisan level. These skills and knowledge are to be used within the scope of the individual's job and authority.

This unit requires employability skills in initiative and enterprise, planning and organising and problem solving in order to undertake hand carving to design requirements. Communication skills are used to access and interpret work requirements and self management skills are applied to ensure project requirements are met. Technology is used to complete work.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Confirm the design requirements	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements and instructions relevant to the hand carving of wood are verified and complied with</p> <p>1.2. The product design requirements are accessed and confirmed as being feasible</p> <p>1.3. The produce design requirements are elaborated on as required and documented to enterprise requirements</p>
2. Select and prepare the wood to be hand carved	<p>2.1. The design requirements in terms of product specification and product usage are analysed and confirmed</p> <p>2.2. The <i>wood species</i> which may satisfy the product specifications are identified</p> <p>2.3. The wood for carving is selected from a detailed analysis and comparison of the product specification and the characteristics, properties and costs of the available wood species</p> <p>2.4. The selected wood is <i>prepared</i> for hand carving</p>
3. Select carving tools	<p>3.1. <i>Carving tools</i> selected are the most appropriate for the job</p> <p>3.2. Selected carving tools are checked for serviceability, <i>sharpness</i>, maintenance compliance and safety</p> <p>3.3. Faults are rectified or passed to qualified persons for rectification</p> <p>3.4. Equipment is selected to hold or support material for hand tools application where applicable</p>
4. Carve the wood	<p>4.1. The <i>method and style of wood carving</i> are selected to meet the design requirements and the selected wood</p> <p>4.2. The carving patterns are applied to and enfaced on the wood to guide the carving and optimise the use of the wood</p> <p>4.3. Carving tools are applied initially to bulk clearances which confirm the wood grain selection and the appropriateness of the tools</p> <p>4.4. Carving tools are applied to the precision requirements of the product design</p> <p>4.5. Quality checks, tests and inspections are carried out throughout the carving operation and adjustments to maintain product quality are</p>

ELEMENT

PERFORMANCE CRITERIA

implemented

5. Finalise the work sequence

5.1. The product is *prepared for finishing* in accordance with the design specification

5.2. Carving tools are cleaned, maintained and stored in accordance with manufacturer specification

5.3. Work area is cleared and waste removed

5.4. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Demonstrates skills to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- interpret and apply technical and quality information in the identification, selection and maintenance of commercially superior carving tools
- interpret, apply and elaborate on specifications for wood carving products
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques which relate to hand carving to avoid re-work and wastage
- identify the most appropriate tool, the specifications and the methods for maintaining the high precision needs throughout the wood carving sequence
- recognise and respond to circumstances outside instructions or previously recognised personal competence
- adapt designs to incorporate the impact of wood carving operations on the intended materials
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of installation techniques
- seek learning opportunities
- use the limited workplace technology related to the selection and high precision use of hand tools

Demonstrates knowledge of:

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to hand carving of wood
- terminology covering hand carving operations and materials

REQUIRED SKILLS AND KNOWLEDGE

- types, characteristics, used and limitations of timber species for hand carving
- techniques for the design and documentation of specifications for hand carved products
- organisational and site standards, requirements, policies and procedures for hand carving of wood
- types, characteristics, uses, limitations and maintenance requirements of the range of tools used in wood carving
- processes for evaluating the quality of carving tools in terms of specifications, safety, maintainability and commercial reputation
- the range of commonly used hand carving techniques
- established communication channels and protocols
- problem identification and resolution
- workplace safety requirements and OHS legislation
- work flow within the workplace

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the use of hand tools
- Interpret product design and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Hand carve a minimum of two significant products including:
 - the interpretation and necessary adoption of the design specifications
 - the selection of timber for the carving
 - the completion of the carving to specification or commercially acceptable standard
 - the preparation of the products for finishing
- Carry out operator maintenance on hand tools including the grinding and sharpening of a range of knives and chisels
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:

EVIDENCE GUIDE

- workplace location or simulated workplace
 - two significant hand carving requirements including design brief or specification
 - a range of optional timbers
 - range of quality carving tools
 - materials for the preparation of the product for finishing
- Method of assessment**
- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
 - Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
 - Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
 - Assessment may be applied under project related conditions (real or simulated) and require evidence of process
 - Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
 - Assessment may be in conjunction with assessment of other related units of competency

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

- Legislative requirements**
- are to be in accordance with applicable legislation from all levels of government that affect organisational operation.
 - Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
- OHS requirements**
- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures.
 - Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
- Organisational requirements**
- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
- Instructions**
- workplace procedures relating to the use and operation of tools and equipment
 - production planning figures
 - workplace instructions, including job sheets, plans, specifications, drawings and designs
 - workplace procedures relating to reporting and communications
 - manufacturer instructions for the use of equipment

- Wood species for carving** • and materials
• may include lime, ash, maple, cherry, English oak, American oak, Japanese oak, walnut, Brazilian mahogany, sycamore, holly, apple, pear, beech, teak, iroko, rosewood, ebony, ramin and blackwood
- Preparation of wood for hand carving** • includes confirmation of grain, identification and response to faults, knots and contaminants, cutting of wood to workable size and shape
- Carving tools** • may include carving knives, chisels (straight, curved, short bent, front bent, spoon bit, back bent, skew, fishtail, spade, parting tool, macaroni, fluterino, backeroni), palm tools, rasps, rifflers, punches, gouges, venier and router
- Tool sharpening** • involves grinding and sharpening using a sandstone wheel or high speed carborundum stone, a fine oilstone, or a fine carving stone
• sharpening a carver's chisel/implement involves sharpening bevels on both sides and rounding off bevels
- Methods and styles of wood carving** • include chip carving, relief carving, Scandinavian flat plane, caricature carving, love spoon, treen and whittling
- Preparation for finishing** • includes sanding (using abrasive papers, glasspaper, garnet paper, aluminium oxide paper and/or silicon-carbide paper), scraping, filling holes and cracks (using stoppers, cellulose filler, shellac sticks, wax sticks) and remedying tool marks (using hot water or hot iron)

Unit Sector(s)

Sector Furniture design and technology

LMFFM4006A Construct joints for custom furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to join timber by constructing joints using hand and portable power tools. It includes adapting/designing joints that are compatible with the product material, purpose and style of the furniture
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furnishing maker operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a highly skilled craftsman or artisan level. These skills and knowledge are to be used within the scope of the person's job and authority
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for work	<p>1.1. Applicable <i>legislative, OH&S</i> and <i>organisational</i> requirements relevant to constructing joints for custom furniture are verified and complied with</p> <p>1.2. <i>Instructions</i>, plans and/or design briefs are read and interpreted to identify furniture joint requirements</p> <p>1.3. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.4. Product purpose, furniture style and construction material are identified</p> <p>1.5. Joints are identified and type of joint to be used is selected and adapted/developed as necessary</p> <p>1.6. Tools, adhesives and fasteners are selected to match the joint type</p> <p>1.7. Quality checking procedures are developed and documented for each step in the joint construction process</p>
2. Make joint	<p>2.1. Cutting and joining lines are marked out to suit joint type</p> <p>2.2. Measurements and calculations are checked for accuracy to ensure quality outcomes</p> <p>2.3. Timber features are identified and optimal usage criteria are observed</p> <p>2.4. Timber is cut to specification, inspected and prepared for joining</p> <p>2.5. Timber is joined in accordance with the job specifications</p> <p>2.6. Fasteners and adhesives are used to make joints firm where required</p> <p>2.7. Finished joint is checked against quality requirements</p>
3. Complete housekeeping	<p>3.1. Unused materials are stored or recycled as required</p> <p>3.2. Tools and equipment are cleaned and stored appropriately</p> <p>3.3. Faulty and/or defective equipment is tagged and reported in accordance with workplace practices</p> <p>3.4. Work area is cleaned and rubbish disposed of appropriately</p> <p>3.5. Workplace documentation and/or reports are</p>

ELEMENT	PERFORMANCE CRITERIA
	completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Collect, organise and understand information related to work orders, basic plans and safety procedures
- Communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- Work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- Use pre-checking and inspection techniques to anticipate custom furniture jointing problems to avoid re-work and wastage
- Recognise and respond to circumstances outside instructions or personal competence
- Plan and organise activities including the preparation and layout of the worksite and the obtaining of tools and materials to avoid any back tracking, work flow interruptions or wastage
- Use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- Clarify and confirm work instructions
- Plan work within given task parameters
- Accept responsibility for given tasks
- Set, monitor and satisfy personal work goals
- Satisfy the competency requirements for the job
- Maintain current knowledge of jointing tools and materials
- Maintain current knowledge of precision timber jointing techniques
- Seek learning opportunities
- Use the workplace technology related to the selection, preparation, operation and maintenance of hand and power tools including calculators and measuring devices
- Apply knowledge of timber technology to optimise the selection and use of timber varieties

Required knowledge

- State or Territory OH&S legislation, regulations, standards and codes of practice relevant to moisture suppressants and barrier systems
- Organisational and site standards, requirements, policies and procedures for the creation of joints
- Types of tools and equipment used in joint construction and procedures for their safe use, operation and maintenance
- Characteristics and properties of timber being used

REQUIRED SKILLS AND KNOWLEDGE

- | |
|--|
| <ul style="list-style-type: none">• Characteristics, properties and selection criteria of adhesives used• Matching requirements of adhesives and fasteners to timbers/materials used• Environmental protection requirements• Established communication channels and protocols• Problem identification and resolution• Work flow in relation to the furniture items being made or repaired |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for preparing and presenting design information
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Select appropriate joint types for the furniture item
- To produce a minimum of four different joint types as specified in the Range Statement in accordance with industry standards and tolerances with at least two produced substantially by hand operations
- Utilise at least three different adhesive types
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the design

EVIDENCE GUIDE	
	<p>and application of jointing techniques</p> <ul style="list-style-type: none"> • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other joint related units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OH&S, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
OH&S requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OH&S, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Joints for custom furniture	<ul style="list-style-type: none"> are to include dowel, mortise and tenon, dovetail, lap joint, biscuit joint, finger joint, housing joint, mitre or bridle joints
Tools and equipment	<ul style="list-style-type: none"> are to include chisels, mallets, mortise gauges, vernier callipers, vices, dovetail saws, tenon

RANGE STATEMENT	
	<p>saws, coping saws, planes, files, hand drills, power drills, dowel jigs and power routers</p> <ul style="list-style-type: none"> • may include portable biscuit machines, power planers, power saws and power sanders
Materials	<ul style="list-style-type: none"> • may include timber (both indigenous and overseas), adhesives and fasteners
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Production planning figures • Workplace instructions, including job sheets, plans, specifications, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturers' instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Furniture Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFFM4007A Produce curved and shaped components for custom furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit covers the competency to produce curved and shaped components for custom furniture.

Application of the Unit

Application of the unit This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of furniture maker operations. The competency applies to a work room and on site environment and involves application of skills and knowledge at a highly skilled craftsman or artisan level. These skills and knowledge are to be used within the scope of the individual's job and authority.

This unit requires employability skills in initiative and enterprise, planning and organising and problem solving in order to produce curved shaped components for custom furniture requirements. Communication skills are used to access and interpret work requirements and self management is applied to ensure project requirements are met.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to the production of <i>curved and shaped</i> components for custom furniture are verified and complied with</p> <p>1.2. <i>Instructions</i> or plans are read and interpreted to identify process required to complete work tasks</p> <p>1.3. <i>Production materials</i> are identified, evaluated and selected</p> <p>1.4. <i>Tools and equipment</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.5. Techniques for bending, forming and shaping components are identified, evaluated and selected for the particular applications</p> <p>1.6. Sequence of work is planned, including the starting point, to ensure efficiency and quality of construction</p> <p>1.7. Quality checking procedures are developed and documented for each step in the production process</p>
2. Complete construction	<p>2.1. Component specifications are set out according to work instructions and materials marked according to industry practices</p> <p>2.2. Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications</p> <p>2.3. <i>Material bending, forming and shaping</i> are undertaken in accordance with the production plan</p> <p>2.4. Components are checked against specified tolerances, fit and accuracy</p>
3. Complete housekeeping	<p>3.1. Unused materials are stored or recycled as required</p> <p>3.2. Tools and equipment are cleaned, maintained and stored appropriately</p> <p>3.3. Faulty or defective equipment is tagged and reported in accordance with workplace practices</p> <p>3.4. Work area is cleaned and rubbish disposed of appropriately</p> <p>3.5. Workplace documentation or reports are completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Demonstrates skills to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate problems in the production of curved and shaped components to avoid re-work and wastage
- innovate and modify techniques for bending, forming and shaping where conventional techniques are not achieving results
- select most appropriate and efficient bending or shaping technique for the given job
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and obtaining equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of installation techniques
- seek learning opportunities
- use the limited workplace technology related to the production of curved and shaped components for custom furniture including tools, equipment and measuring devices

Demonstrates knowledge of:

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the production of curved and shaped components for custom furniture
- organisational and site standards, requirements, policies and procedures for the production of curved and shaped components for custom furniture
- techniques for timber bending, forming and shaping
- types, characteristics, uses, limitations and maintenance requirements of solid

REQUIRED SKILLS AND KNOWLEDGE

timbers commonly used in furniture production

- types, characteristics, uses and limitations on hand and power tools used in timber bending, forming and shaping
- the interpretation of plan representation of furniture design
- techniques for the preparation of drawings/set-outs/rods and geometrical concepts
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- work flow within the workplace

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the production of curved and shaped components for custom furniture
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Produce a minimum of six significant timber curved components, five from solid timber and one using ply:
 - one involving shaping from solid timber using hand techniques
 - one involving shaping from solid timber using machine techniques
 - one involving laminating
 - one involving use of heat/steam
 - one involving other techniques
- Items must demonstrate appropriate design, use of materials and strength for purpose
- Conduct operator maintenance on machines and related tools and equipment
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in

EVIDENCE GUIDE

an off-site context

- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - realistic curved and shaped component tasks
 - materials and equipment relevant to production of curved and shaped components for custom furniture
 - specifications and work instructions

Method of assessment

- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other related units of competency

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

- | | |
|------------------------------------|--|
| Legislative requirements | <ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. • Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage |
| OHS requirements | <ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. • Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling, including lifting and carrying |
| Organisational requirements | <ul style="list-style-type: none"> • may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines) |
| Curved components | <ul style="list-style-type: none"> • include curved timber components produced by laminating, coopering, steam bending and saw kerfing |
| Shaped components | <ul style="list-style-type: none"> • include timber shaped by hand or static machine tools |
| Instructions | <ul style="list-style-type: none"> • workplace instructions regarding techniques, materials, tools and equipment required in the production of curved and shaped components for custom furniture |

- workplace procedures relating to the use and operation of tools and equipment
 - workplace instructions, including job sheets, plans, specifications, drawings and designs
 - workplace procedures relating to reporting and communications
 - manufacturer instructions for the use of equipment and materials
- Materials**
- may include but are not limited to timber, plywood, MDF, veneer, plastic laminate, sheet metal, adhesives, screws, nails, dowels, decorative finishes, abrasive paper and finishing materials
- Tools and equipment**
- may include, but are not limited to, measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, pneumatic tools, clamps, screwdrivers, pincers and rasps
- Machines**
- may include but are not limited to band saws, cross cut saws, mitre saws, panel and rip saws, surface planers, panel planers, belt sanders, horizontal borers, vertical, drill presses, dove-tailers, pedestal grinders, wood turning lathes, veneer guillotines and presses
- Material bending, forming and shaping techniques**
- techniques are to include steam/bending, laminating, coopering, saw kerfing, hand shaping and machine shaping

Unit Sector(s)

Sector

Furniture design and technology

LMFFM4008A Produce timber veneered components for custom furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit covers the competency required to produce timber veneered components for custom made furniture.

Application of the Unit

Application of the unit This unit supports the attainment of skills and knowledge required for competent workplace performance in the wide variety of fine woods operations. The competency applies to a workshop environment and involves application of skills and knowledge at a craftsman or artisan level. These skills and knowledge are to be used within the scope of the individual's job and authority.

This unit requires employability skills in initiative and enterprise, planning and organising and problem solving in order to produce timber veneered components for custom made furniture. Communication skills are used to access and interpret work requirements and self management is applied to ensure project requirements are met.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Applicable <i>legislative, OHS</i> and <i>organisational</i> requirements relevant to producing timber <i>veneered components</i> for custom made furniture</p> <p>1.2. <i>Instructions</i>, plans or design briefs are read and interpreted to identify processes and materials to complete work tasks</p> <p>1.3. Suitable timber or timber veneer material is identified, evaluated and selected</p> <p>1.4. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.5. Sequence of work is planned and documented, including the starting point, to ensure efficiency and quality of finish</p> <p>1.6. Quality checking procedures are developed and documented for each step in the veneering process</p>
2. Prepare timber veneer	<p>2.1. Timber is selected and the cutting face is prepared</p> <p>2.2. Veneer timber is cut along grain at the specified thickness</p> <p>2.3. Veneer thickness and consistency are monitored with respect of size and tolerances</p> <p>2.4. Veneer is dressed to the required tolerances for further use</p>
3. Layout and prepare materials	<p>3.1. Design of veneer is laid out</p> <p>3.2. Veneers are selected and checked for flaws</p> <p>3.3. Veneers are matched and method of <i>joining to adjacent veneers</i> is selected and prepared for</p> <p>3.4. <i>Veneers</i> are prepared for application and laid out</p> <p>3.5. <i>Suitable joining processes</i> to backing and adjacent veneers are selected and prepared</p> <p>3.6. The <i>style of edge finish</i> is selected and prepared for</p>
4. Apply and/or fit and finish	<p>4.1. Veneers are measured, marked and cut to size and applied to base material</p> <p>4.2. Adhesives are applied according to workplace procedures and manufacturers' instructions</p> <p>4.3. Selected joining process is applied in accordance with workplace procedures including the use of protective equipment</p>

ELEMENT	PERFORMANCE CRITERIA
	4.4. Final trim and finishing are completed to specifications
	4.5. Work is checked against required quality standards
	4.6. Any non-conformity with the required quality standard is rectified
5. Complete housekeeping	5.1. Unused materials are stored or recycled as required
	5.2. Tools and equipment are cleaned, maintained and stored appropriately
	5.3. Faulty or defective equipment is tagged and reported in accordance with workplace practices
	5.4. Work area is cleaned and rubbish disposed of appropriately
	5.5. Workplace documentation and/or reports are completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Demonstrates skills to:

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to anticipate veneering production and application problems to avoid re-work and wastage
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- clarify and confirm work instructions
- plan work within given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of installation techniques
- seek learning opportunities
- use the limited workplace technology related to the production of timber veneer components, including tools, equipment, calculators and measuring devices.

Demonstrates knowledge of:

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the production of timber veneer components
- organisational and site standards, requirements, policies and procedures for the production of timber veneer components
- types, characteristics, uses and limitations of veneers
- techniques for the manufacture and application of veneers
- types, characteristics, uses and limitations of different veneering timbers
- the interpretation of plan representation of furniture design
- the preparation of drawings/set outs
- types, characteristics, uses and limitations of tools and equipment and procedures

REQUIRED SKILLS AND KNOWLEDGE

for their safe use, operation and maintenance

- work flow in relation to furniture production
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the relevant Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for producing timber veneer components
- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
 - minimise the risk of injury to self and others
- Prepare a minimum of one significant veneer including:
 - the selection of materials
 - the preparation of the cutting face
 - the cutting and dressing of the veneer
- Apply and finish veneers to at least three different surfaces - one flat, one curved and one being a laminate, including at least two requiring veneer edging
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - realistic task for the preparation/production of a veneer
 - realistic tasks related to the application of veneers

EVIDENCE GUIDE

Method of assessment

- materials and equipment relevant to the production and application of veneers
- specifications and work instructions
- Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
- Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge
- Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- Assessment may be applied under project related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other related units of competency

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

- Legislative requirements**
- are to be in accordance with applicable legislation from all levels of government that affect organisational operation.
 - Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
- OHS requirements**
- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures.
 - Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
- Organisational requirements**
- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
- Veneered components**
- refers to the thin slices of wood, usually thinner than 3 mm (1/8"). Timber veneer is usually glued and pressed onto core panels of different material (such as wood, particle board or medium density fibreboard). They are also used in parquetry, marquetry, intarsia and inlays.
- Instructions**
- workplace veneering instructions, including job sheets, plans, specifications, drawings and designs

- workplace procedures relating to reporting and communications
 - manufacturer instructions for the use of equipment and materials
- Tools and equipment**
- are to include but are not limited to knives, chisels, measuring tapes or rules, mallets, squares, levels, planes, band saws, rotary lathe, slicing machine, half round lathe, power saws, power drills/screwdrivers, hand drills, pneumatic tools, clamps, screwdrivers, rollers, laminate trimmers, cutters and hand routers, sand paper, wire wool and sanding block
- Materials**
- may include but are not limited to timber, manufactured board, laminates, timber strips, adhesives, cleaning materials and tapes
- Veneers**
- where two or more layers of veneer are adhered to each other they are referred to as laminates. A laminate may be employed to provide structured strength or shape (eg the back of a chair) that also has visual appeal. Alternatively, a veneer may be applied to a laminate of different material for visual appeal whilst maintaining other structural benefits. In most of these latter cases the laminate used is entirely covered from exterior view.
- Suitable joining processes**
- Employ one of the following methods:
 - **Mechanical Press.** A press that uses two flat plates being brought together to press the veneer to the substrate during the gluing process. It may be purely mechanical using a screw or level action or be closed with a hydraulic ram. This method is only used for veneering flat surfaces.
 - **Vacuum Technique.** This involves the component being veneered being placed in a form of bag from which the air is extracted. This method is favoured for veneering curved surfaces and also by smaller operators because of its flexibility.
 - **Hot Glue Hammering.** This is a traditional method of veneering and is not now widely used. It involves using hot glue on the surfaces being veneered and then hammering the veneer to the subsurface with a hammer. The earliest known examples of veneer used this method.
- Joining to adjacent veneers**
- Refers to the joining of adjacent sheets of veneer. This may be by:
 - butting two right angle edges together then 'stitching' the veneer using a hot melt glue or tape

- (commonly used for flat surfaces) or
- using a scarf joint then gluing the surfaces together (commonly used on curved surfaces)
- Style and edge finish**
- may be either solid timber or veneer to cover the exposed edge

Unit Sector(s)

Sector Furniture design and technology

LMFFT4001B Coordinate on-site installation of furnishing products

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to coordinate tradespersons who provide services involved in the installation, refurbishment, restoration or repair of furnishing products, primarily in a kitchen, bathroom or laundry setting.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan the coordination of trade services involved in the project	1.1. Work instructions are used to determine job requirements, including design, tolerances, process, materials, finish and quantity 1.2. Load bearing walls are located 1.3. Work site is inspected for compliance with contract documentation, including confirmation that all work can be undertaken as a non-structural improvement 1.4. Additional information or revised drawings are sourced where necessary 1.5. Tradespersons are identified for the required installing services 1.6. Timeframes for carrying out the work are developed
2. Coordinate and inspect trade service outcomes	2.1. Appropriate trade services are coordinated in accordance with relevant timeframes 2.2. The impact of any variations are assessed and timeframes are varied as necessary 2.3. Trade works are progressively checked to ensure compliance with contract documentation 2.4. Satisfactory performance of trade services carried out by trade provider is monitored 2.5. The rectification of identified faults is organised and coordinated 2.6. The restoration of the site is coordinated to ensure compliance with contractual and industry standards
3. Verify trade work compliance with contract requirements	3.1. Final trade work is inspected, assessed and accepted or rejected 3.2. Payments for accepted trade services are authorised

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to multi-trade work instructions and work orders, building and structural plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with tradespeople, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the coordination of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate time and material requirements
- use pre- and progressive checking and inspection techniques to anticipate coordination problems, avoid re-working and avoid wastage
- use workplace technology related to the coordination, including communication equipment, time and management aids and other measuring devices

Required knowledge

- the tasks, functions, responsibilities and regulatory requirements for tradespeople involved in water supply and drainage, supply of power and lighting, ceiling and wall linings, tiling and waterproofing, flooring and painting
- relevant building codes, regulations and codes of practice
- plan interpretation techniques and standards
- workplace coordination and communication techniques
- conflict resolution techniques

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret contracts and work orders and locate and apply relevant information.
- Apply safety coordination requirements for equipment, products and materials, including ventilation requirements and the use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Coordinate a site involving at least three tradespeople on three separate occasions
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to work instructions, plans, work orders, associated and supporting tradespeople, industry and other standards, communications equipment and work areas.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
Furnishing products may include:	<ul style="list-style-type: none"> • cabinets and the full range of products required in the installation • refurbishment • restoration or repair of furnishing • particularly in kitchens • bathrooms or laundries
Coordinated tradespersons	<p>Those who, by regulation and competency, have the authority to work on:</p> <ul style="list-style-type: none"> • water supply • fixtures and fittings • drainage • natural and artificial lighting • power sources • ceiling and wall linings • waterproofing and sealants • ceramic tiling • interior painting • floor/finish coverings
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices.</p>
Information and procedures	<ul style="list-style-type: none"> • Contractual documents and explanatory notes • Building codes, Australian Standards and CSIRO Notes on the Science of Building

RANGE STATEMENT

	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures
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Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT4002B Customise stock lines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the competency to identify and clarify requirements, analyse and select options, and to develop, implement and test the customisation processes necessary to adapt stock lines to meet the requirements of a furnishing enterprise.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess requirements	1.1. Customer/specification is consulted to determine requirements: 1.1.1. Cost and feasibility of requirements is evaluated 1.1.2. Development requirements are explored, taking into consideration process, material, quantity, cost and outcome requirements 1.1.3. Codes, regulations and technical documentation are consulted to establish design limitations, where applicable 1.1.4. Specialist expertise is consulted as required
2. Propose options	2.1. Options for the use and modification of stock lines are defined and proposed to the customer to determine most appropriate modifications 2.2. Modification of stock lines is considered to take into account production, facility, ergonomic requirements, OHS and environmental factors
3. Develop modifications to stock lines	3.1. Modifications are developed to meet customer specifications/standards, use and all legislative or regulatory requirements 3.2. Verification of the development is undertaken in accordance with workplace procedures
4. Coordinate implementation and testing of modifications	4.1. Implementation of modifications is arranged and coordinated 4.2. Outcome is tested and assessed to establish conformance to requirements 4.3. Variations to the design are carried out where necessary 4.4. Documentation is prepared to meet all requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to the customisation of stock lines, including the relevant technical, regulatory, ergonomic, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment, systems and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and dimensions, create and test customisation options, and estimate material requirements
- create and apply systematic problem solving techniques to anticipate customisation problems, avoid re-working and avoid wastage
- use the workplace technology related to the customisation, including machinery, tools and equipment, calculators and measuring devices and control systems

Required knowledge

- company business policies and plans, including procedures for product modification and product development
- ergonomic principles for furniture design and manufacture
- enterprise design practices and processes
- the range of company products, market, work systems and equipment
- relevant regulatory requirements, recognised standards and codes, and industry practices

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical Aspects of Evidence</p>	<ul style="list-style-type: none"> • Locate, interpret and apply relevant information • Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment • For a minimum of one significant stock line: <ul style="list-style-type: none"> • identify the impact of decisions in terms of commercial, environmental and safety risks • evaluate existing stock line designs and propose modifications • evaluate design and design modification performance • coordinate modification and testing • Suggest improvements to stock line designs and where authorised, negotiate changes • Work effectively with others
<p>Resource Implications</p>	<p>Stock lines, including design, production specifications and procedures, customer requirements and access to realistic customisation options.</p>
<p>Method of Assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.</p>
<p>Context of Assessment</p>	<p>Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • Work involved in customisation of existing stock lines to satisfy particular site and/or customer requirements • Work is generally performed with little external assistance and with minimal supervision or direction. The development of modifications may require the assistance and cooperation of others
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate conceptual and analytical ability, discretion, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • The proposing of modifications to existing stock lines to satisfy customer requirements is undertaken in accordance with established enterprise procedures and practices • Customers may be internal or external
Tools and equipment may include:	<ul style="list-style-type: none"> • any normally used in producing/constructing/assembling the stock lines of the enterprise
Personal protective equipment	<ul style="list-style-type: none"> • that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Product drawings, prototype, design brief, patterns, specifications and/or specifications • Machine manufacturers' specifications and operational procedures • Workplace instructions, including, job sheets,

RANGE STATEMENT	
	plans, drawings and designs <ul style="list-style-type: none"> • Workplace procedures relating to reporting and communicating • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Tech
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT4003B Organise production processes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to organise, using all available information and resources, the production of mass-produced and customised fittings, equipment and assemblies in the furnishing industry.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Collect information and analyse job requirements	1.1. Job specifications are read and key requirements are noted: <ul style="list-style-type: none"> 1.1.1. Steps and stages in the process are identified 1.1.2. Clarification of specifications is sought where required 1.1.3. Equipment capabilities are assessed in terms of meeting job specifications 1.1.4. Enterprise production plans, including run time and quantities are compared with plant capabilities
2. Complete preparatory activities	2.1. Workplace health and safety requirements, including personal protection needs, are observed throughout the work <ul style="list-style-type: none"> 2.2. Reports are made to appropriate personnel 2.3. Proposals for modifications/adaptation of equipment are made 2.4. Requirements for tooling/dies are listed 2.5. Raw material requirements are listed and communicated to appropriate personnel
3. Organise operational plans	3.1. Operational work plans, including timeframes and milestones are developed <ul style="list-style-type: none"> 3.2. Production operations are organised ensuring optimum use of resources 3.3. Operational plans are recorded and amended in accordance with enterprise procedures and industry practice
4. Conduct trials to monitor equipment operation and product quality	4.1. Equipment is set up to make appropriate use of guards, warning devices and safety features, and standard operating procedures are modified to suit the production <ul style="list-style-type: none"> 4.2. Equipment operations are monitored to ensure variations or inconsistencies in output are identified, reported and rectified 4.3. Required adjustments to equipment controls and settings are made to ensure consistency and continuity in production 4.4. Equipment maintenance, set-up and close-down procedures are planned and documented 4.5. Product quality is inspected and compared to requirements

ELEMENT	PERFORMANCE CRITERIA
	4.6.Process is modified where required to improve product quality
5. Monitor product finish	5.1.Product finish is checked for conformity to design specification 5.2.Any non-conformity in product finish is noted and possible causes investigated and documented
6. Evaluate production process	6.1.Productivity information and reports are prepared and processed 6.2.All procedures for the process are checked for conformity with trial outcomes 6.3.Work procedures are authorised by appropriate personnel for implementation 6.4.Recommendations for variations to design specifications are made to appropriate personnel.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to the organisation of production processes, including the relevant technical, regulatory, cultural, environmental and safety requirements
- communicate ideas and information to enable clarification of the conceptual requirements, coordination of work with site supervisors, workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment, systems and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and foster the team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, complete production computations and estimate material requirements
- create and apply systematic problem solving techniques to anticipate production problems, avoid reworking and avoid wastage
- use the workplace technology related to production, including machinery, plant, tools and equipment, calculators and measuring devices and computing/computer-aided systems

Required knowledge

- organisational and workflow theory
- work leadership theory
- company business policies and plans, including procedures for setting up for production
- company products, market, work systems and equipment
- machine processes relevant to the production
- quality procedures, inspection and testing requirements
- legislative requirements of the work activities

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Locate, interpret and apply relevant information
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- Analyse job requirements and materials and equipment capabilities
- For a specified and significant production operation organise the implementation of operational plans, including:
 - conduct of trials
 - coordination of the production process
 - evaluation of the production process
 - reporting on the success of the process
- Lead others and work effectively to organise for production
- Encourage participation of employees in the planning of work activities and changes
- Suggest improvements to production operations and where appropriate, negotiate changes

Resource Implications

Production equipment, raw materials, personnel and production plans and schedules.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • This unit covers the work involved in the operational organisation, preparation, trialling and monitoring of production processes for enterprises within the furnishing industry • Operational resources include personnel, equipment and machinery, production materials and consumables, and infrastructure
Unit context	<ul style="list-style-type: none"> • OHS legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate conceptual ability, discretion, judgement and problem solving skills
Operational planning information	<p>Information may be obtained from sources such as enterprise production plan/schedule, product drawings and specifications, equipment instructions and capacities, relevant standards, inspection requirements and design rules, customer orders, archives, records and cutting lists</p>
Workplace environment	<ul style="list-style-type: none"> • Work is generally performed with little assistance from others and with minimal supervision or direction • Organising production is undertaken in accordance with established enterprise procedures and practices • Customers or suppliers may be internal or external
Machines/equipment used in the	<ul style="list-style-type: none"> • any machine typically used in the furnishing

RANGE STATEMENT	
production process may include:	sector concerned <ul style="list-style-type: none"> • microprocessor or computer-controlled machines • both production and facility equipment used in the enterprise
Materials	Materials to be used include those normally used in the enterprise and the industry
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Enterprise production plan/schedule • Work procedures/instructions • Manufacturer technical specifications and instructions • Legislation, regulations and codes of practice relevant to the production environment and processes • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFFT4004B Establish and monitor production inventory requirements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to determine, specify and document the production materials and consumables required for the production of mass-produced and customised fittings, equipment and assemblies. This unit does not cover the management of the inventory.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify materials requirements	1.1. Drawings and specifications for materials are read and interpreted 1.2. Sources of product supply are identified 1.3. Normal quantity supply and matching storage facilities and equipment are identified 1.4. Material safety data sheets or other supplier safety information are read and any relevant engineering controls or personal protection equipment are identified, any additional resources required for safe workplace handling and storage of the materials are documented and reported 1.5. Procedures to deal with fire or explosion risk, spills or injury are identified and recorded
2. Monitor consumables and production materials	2.1. Consumables and production materials are checked for conformity to design specification and capacity to meet the requirements of the end product 2.2. Any non-conformity in materials is noted and possible causes investigated and documented, including any variations, which may need to be made to the production process or materials used 2.3. Materials and consumables are compared with competitive products, market information and recommendations are made on preferred options 2.4. Preparation procedures for consumables and production materials are identified and checked for required additives, consumables and other materials or equipment requirement 2.5. Materials ordering, storage, safe movement and waste disposal needs are identified
3. Document materials estimates	3.1. All procedures for the estimates process are checked for conformity with workplace procedures 3.2. Cost reports (including time, maintenance) are prepared 3.3. Estimates are authorised by appropriate personnel for implementation 3.4. Recommendations for variations to materials specifications are made to appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to the production inventory, including the relevant technical, regulatory, environmental and safety requirements
- communicate ideas and information to enable clarification of the inventory requirements and availability and the reporting of outcomes and proposals
- plan and organise activities to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly calculate inventory requirements, taking into account lead times, re-order triggers, impacts of turnover and supply margins
- create and apply systematic problem solving techniques to anticipate interruptions to supply and to avoid surplus holdings and wastage
- use the workplace technology, including calculators and measuring devices and computing/computer-aided systems

Required knowledge

- company business policies and plans, including procedures for company products, market, work systems and equipment
- authorised production processes and plans and related materials and consumables
- materials and process characteristics and special requirements
- commercial supply systems, including standard documentation support processes
- cost-benefit analysis or equivalent techniques

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, interpret and apply relevant information
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- Identify process requirements in terms of materials and specialist equipment
- Identify appropriate materials and consumables to match production and product quality standards
- Identify commercially viable sources of materials and consumables
- Calculate materials and other resource requirements and costs
- Cost and document requirements
- Identify the impact of decisions in terms of commercial, environmental and safety risks

Resource implications

Access to production plans, materials and consumables specifications, commercial supply system indices, directories and catalogues, financial resources and delegations, and appropriate software.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- This unit covers the work involved in identifying and documenting appropriate amounts of materials and consumables to support production
- Decisions are made within the context of application of process, materials knowledge and estimates and extensive knowledge of the required production output and product quality standards
- The function is undertaken in accordance with established enterprise procedures, and practices may include requirements recommended by manufacturers

Unit context

- OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate conceptual ability, discretion, judgement and problem solving skills

Workplace environment

- Work may involve individual and team related activities and will normally relate to the standard forms of activity performed in the enterprise and industry
- Work is performed with minimal supervision or direction
- Customers or suppliers may be internal or external

Machines/equipment may include:

any machine typically used in the furnishing industry

RANGE STATEMENT	
	<ul style="list-style-type: none"> • microprocessor or computer-controlled machines <p>both production and facility equipment used in the enterprise</p>
Materials may include but are not limited to:	<ul style="list-style-type: none"> • timber • metal alloys • cloth, glass • flooring materials • the full range of consumables required to directly support the production process
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Work procedures/instructions • Manufacturer specifications and instructions • Production process supply support information and specifications • Commercial supply system indices, catalogues and bulletins • Supplier evaluation histories • Budgetary/fiscal constraints • Legislation/regulation/national and industry codes and practices relevant to the product • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT4005B Install and commission CNC software

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the installation and commissioning of CNC process and machine control programs in the furnishing industry.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for software installation	1.1. Program format and operational intent is accurately determined and required applications identified 1.2. Specifications are checked for required operating conditions 1.3. Program instructions are checked for compliance with specifications 1.4. Software timers are set to specification where required
2. Install automatic process machine control program	2.1. Appropriate program loading technique is selected 2.2. External loading devices are correctly connected to automatic process machine control systems 2.3. Machine control system is placed in correct operational mode to accept program loading 2.4. Program is downloaded in accordance with manufacturer recommended procedure and enterprise requirements 2.5. Checks are made during and after downloading to ensure accurate and complete data transfer 2.6. External program loading devices and connections are disconnected from process and machine control system
3. Commission automatic process and machine control program	3.1. Operation of the equipment using the program is observed 3.2. Outputs are checked and measured for compliance with specifications 3.3. External inputs are checked for compliance with specifications, according to specified procedures 3.4. Total operation is checked for compliance with specifications where applicable 3.5. Location of program master copy storage is confirmed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to CNC installation and commissioning, including the relevant technical, regulatory, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of work with site managers, supervisors, and other workers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the coordination of equipment, systems and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and calculations required during the installation and commissioning
- create and apply systematic problem solving techniques to anticipate installation and commissioning problems, avoid reworking and avoid wastage
- use the workplace technology related to the installation and commissioning, including calculators, measuring devices and other computing/computer-aided systems

Required knowledge

- computer science theory
- CNC control system characteristics, applications and limitations
- procedures and techniques for programming CNC equipment
- operation requirements of equipment and work systems to be programmed

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, interpret and apply relevant information
- Apply safety requirements throughout the sequence, including the use of personal protective clothing and equipment
- Install and commission CNC software on at least two different machines and
 - identify requirements of tasks and organise work to achieve goals and results
 - select and install software programs for the CNC equipment
 - select and apply appropriate loading techniques
 - check and adjust machine operations and programming
 - suggest improvements to CNC controlled operations and where authorised, negotiate changes
- Modify activities to cater for variations in workplace cultures and environment
- Work effectively with others

Resource implications

CNC equipment, software, production materials.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope	<ul style="list-style-type: none"> • This unit covers the work involved in installing and commissioning of CNC process and machine control programs used in the furnishing industry • The installation and commissioning of CNC programs is undertaken in accordance with established enterprise procedures, and practices may include requirements recommended by manufacturers/developers
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate analytical and organisational ability, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • Work may involve individual and team related activities in workplaces where the CNC equipment is either new or being substantially upgraded • Work is generally performed without other qualified assistance • Customers are normally internal
Machines	<p>Machines requiring CNC software installation and commission include individual production/manufacturing or treatment machines and processing and machining centres</p>
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and</p>

RANGE STATEMENT	
	enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Manufacturer specifications and instructions • Procedures for installing and commissioning CNC programs • Organisation work specifications and requirements • Legislation/regulation/national and industry codes and practices relevant to the installation and commissioning • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT4006B Construct prototypes and samples

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the construction of prototypes and samples in accordance with established plans, drawings or specifications.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish the work requirements	1.1. Purpose of the prototype or sample is identified from plans and drawings 1.2. Materials specifications for the item are identified from workplace documentation 1.3. Ergonomic requirements are identified, clarified and satisfied throughout the work process 1.4. Construction requirements and methods are identified appropriate for the materials used
2. Plan prototype or sample construction	2.1. Work plan for the item construction is drafted 2.2. OHS requirements, including personal protection needs, are observed throughout the work 2.3. Compatibility of materials in specifications is checked and any discrepancies reported 2.4. Steps or stages in construction are identified, noting checkpoints for measurements and tests 2.5. Suitable work area is located and cleared ready for work
3. Obtain materials and equipment	3.1. Materials are selected according to specifications and assembled ready for use 3.2. Compatibility of materials with specifications is checked and any discrepancies reported 3.3. Equipment and accessories suitable for working the specified material are assembled 3.4. Appropriate jigs and other construction aids are identified and where required adjusted to suit the work
4. Construct the prototype or sample	4.1. Work plan is followed to construct the item 4.2. Checks are conducted at the identified points 4.3. Modifications to designs and plans are identified and recommended within workplace procedures 4.4. Modifications to the plan are documented and followed 4.5. Prototype or sample is checked for fitness for purpose

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to the construction requirement, including the relevant technical, regulatory, environmental and safety requirements
- communicate ideas and information to enable clarification of the construction requirements, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment, systems and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and dimensions, create accurate and scaled drawings, and estimate material requirements
- create and apply systematic problem solving techniques to anticipate construction problems, avoid re-working and avoid wastage
- use the workplace technology related to the construction, including machinery, tools and equipment, calculators and measuring devices and computing/computer-aided systems

Required knowledge

- characteristics of the materials used in relation to the use of the end item
- design features and requirements for the prototype or sample
- operation of tools and equipment used and the application of the finished product
- identification of equipment, processes and procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order, plans and specifications and locate and apply relevant information
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Construct a minimum of two different prototypes/samples and:
 - identify compatibility/incompatibility of materials, adhesives, fittings, fasteners, for the application
 - select and apply appropriate joinery, construction and finishing techniques
 - select and use appropriate materials, equipment and processes for the item being constructed
 - demonstrate how the design of the prototype components will influence the working lifetime of the item
 - ensure that the prototype satisfies the original or varied specification
- Modify activities to cater for variations in workplace contexts and environment
- Work effectively with others

Resource implications

Materials, work order, specifications, plans, tools, equipment and consumables.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning

EVIDENCE GUIDE	
	knowledge. Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.
Context of assessment	Assessment may occur on the job or in a simulated workplace facility with relevant process equipment, simulated work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- This unit covers the work involved in constructing prototypes and samples of products from plans and drawings
- Prototypes and samples may be produced by hand, by using appropriate machines, tools and equipment or by computer assisted production and will reflect the finished products produced by the enterprise
- The unit requires the use of hand and power tools, basic static and specialised machines, and the application of joinery, construction and finishing techniques

Unit context

- OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate analytical and organisational ability, discretion, judgement and problem solving skills

Workplace environment

- The construction of prototypes and samples is undertaken in accordance with established enterprise procedures and practices
- Work is generally performed with little external assistance and with minimal supervision or direction
- Customers may be internal or external

Machines/equipment may include:

- any machine typically used in the furnishing sector concerned
- microprocessor or computer-controlled machines

RANGE STATEMENT	
	<ul style="list-style-type: none"> • both production and facility equipment used in the enterprise
Materials	<p>Materials to be used to construct prototypes and samples will represent those normally used by the enterprise in its production processes. They may include but are not limited to:</p> <ul style="list-style-type: none"> • timber • metal alloys • glass • fabrics and textiles • plastics • leather • adhesives • fillers and finishes as appropriate
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices</p>
Information and procedures	<ul style="list-style-type: none"> • Work procedures/instructions • Designer/drawer specifications and instructions • Organisation work specifications and requirements • Legislation/regulations/national or industry codes and practices relevant to the prototype/sample construction • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT4007B Sample, inspect and test products to specifications

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to take product samples, identify and apply authorised testing procedures, interpret test results and report findings within a furnishing enterprise.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify specifications and test procedures	<p>1.1. Product quality specifications are read, drawings interpreted and test parameters are identified</p> <p>1.2. Test methods for each required test parameter are identified and the most efficient test method is noted</p> <p>1.3. Any requirement for testing by personnel external to the work area is identified and appropriate permission is obtained</p> <p>1.4. Design features that impact on testing and inspection are identified</p>
2. Select evidence	<p>2.1. Appropriate conforming and/or non-conforming products, materials and/or waste are selected for testing in accordance with enterprise requirements</p> <p>2.2. Observations of operators and copies of procedures are collected</p>
3. Conduct and interpret tests	<p>3.1. Tests are conducted following workplace procedures and results are documented</p> <p>3.2. Comparisons of all data collected are made</p> <p>3.3. Any recommendations are noted and considered for feasibility</p>
4. Report findings	<p>4.1. Findings of tests are documented</p> <p>4.2. Any potential or existing problems and appropriate recommendations are identified and reported in accordance with enterprise procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to quality checking processes, including the relevant technical, regulatory, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of work with site supervisor, other workers and customers, and the reporting of outcomes and findings
- plan and organise activities, including the obtaining of equipment, systems and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and calculations required in quality checking processes and estimation of material requirements
- create and apply systematic problem solving techniques to anticipate problems, avoid re-working and avoid wastage
- use the workplace technology related to quality checking, including machinery, tools and equipment, calculators and measuring devices and computing/computer-aided systems

Required knowledge

- general quality systems theory
- sampling techniques for commonly encountered materials
- inspection techniques and faults common within the sector products
- testing techniques (destructive and non-destructive) relevant to the sector and related equipments/aids
- workflow in relation to required times and stages where quality checking is required

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Interpret work order and determine test requirements • Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment • Follow work instructions, operating procedures and inspection practices to arrange/conduct a minimum of four different processes covering sampling, inspection and testing • Analyse test results and interpret outcomes against requirements • Modify activities to cater for variations in workplace contexts and environment • Work effectively with others
<p>Resource implications</p>	<p>Production or product finishing facility, testing equipment and procedures.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- This unit covers the work involved in collecting samples and their inspections and testing to check product quality
- Extent of sampling and the nature of inspection and testing will be undertaken in accordance with industry standards and practices and will reflect the type of product, the materials and processes used in its manufacture and its end use. It may include:
 - samples of raw materials
 - components,
 - assemblies
 - end products
- Materials to be sampled will represent those normally used by the enterprise in its production processes. They may include but are not limited to:
 - timber
 - metal alloys
 - glass, fabrics and textiles
 - plastics
 - leather
 - adhesives
 - fillers and finishes as appropriate

Unit context

- OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate

RANGE STATEMENT	
	organisational and analytical ability, discretion, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • Sampling, inspecting, testing and reporting of findings is undertaken in accordance with established enterprise procedures and practices • Work is generally performed with little external assistance and with minimal supervision or direction • Customers or suppliers of material to be sampled may be internal or external
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Work procedures/instructions • Designer/drawer specifications and instructions • Quality systems documentation or equivalent containing sampling, inspecting and testing frequency and criteria • Organisation work specifications and requirements • Legislation/regulation/national and industry codes and practices relevant to the products • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT4008B Interpret and use workplace information

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to locate, use, interpret and manipulate workplace information and statistics in support of development or production activities within the furnishing industry.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify situations where statistics are used in the workplace	1.1. Types of statistical representations of data used in the workplace are identified 1.2. Users of statistical data in the workplace are identified 1.3. Statistical data representations are matched for applications to: <ul style="list-style-type: none"> 1.3.1. monitoring workflow 1.3.2. inventory and stock levels 1.3.3. customer surveys 1.3.4. supplier and market analysis
2. Collect data	2.1. Purpose of data collection is identified 2.2. Sources of information are identified 2.3. Data collection methods are used 2.4. Mathematical processes are used to arrange data 2.5. Data collected is checked for accuracy 2.6. Potential for inaccurate results arising from variables is estimated and described
3. Use calculations to present data for analysis	3.1. Data collected is represented on graphs, tables, averages and percentages as required 3.2. Spreadsheets, flow charts and/or graphs are used to present data
4. Interpret trends and patterns from numerical data	4.1. Non-conforming results outside of the predicted outcome are noted and reasons identified 4.2. Trends or patterns in data are noted 4.3. Possible reasons for trends or patterns are generated 4.4. Potential solutions are identified

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and interpret information related to production, distribution, resource and safety issues
- communicate ideas and information by means and methods which are comprehensible to supervisors, other workers and customers
- access and interpret business information in a timely manner so that it may be used to avoid any backtracking, workflow interruptions or wastage
- work with others to foster the team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly create and interpret statistical information
- create and apply systematic problem solving techniques to anticipate changing information requirements or influences
- use the workplace technology related to workplace information, including equipment, calculators and measuring devices and computing/computer-aided systems

Required knowledge

- contemporary business information and statistical reporting, forecasting and presentation techniques
- mathematical calculations, including:
 - addition
 - subtraction
 - multiplication
 - division
 - percentage
- company business policies and plans, including procedures for reports
- company quality systems and business equipment

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, interpret and apply relevant information
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- Use general and statistical data representations to explain work processes and/or outcomes
- Identify and read graphs, charts, tables and statistical results
- Interpret general and statistical data accurately
- Use appropriate workplace language and communication technologies
- Maintain workplace records

Resource implications

Range of business information and statistical data, graphical, tabular and spreadsheet presentation capabilities.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • This unit covers the work involved in interpreting and using statistics to manage performance in the areas of production, services and organisation • The application of statistics can be computer assisted, either integrated into the enterprise processes, or stand-alone. Hand held calculators, graphs, charts and mathematical tables may also be used.
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate analytical ability, discretion, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • The use of statistics within an enterprise is undertaken in accordance with established enterprise procedures and practices • Work is generally performed with little external assistance and with minimal supervision or direction. The development of modifications may require the assistance and cooperation of others • Customers may be internal or external
Tools and equipment	<p>Tools and equipment are to include appropriate computing systems for the storage, manipulation, management and presentation of statistical information</p>

RANGE STATEMENT	
Information and procedures	<ul style="list-style-type: none"> • Work procedures/instructions • Organisation work specifications and requirements • Benchmarking information and standards • Legislation/regulations/national and industry codes and practices relevant to the product • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT4009A Match furnishing style/materials to customer requirements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the competency to assess customer requirements, to analyse all available and practical options and to match furnishing style/materials to customer requirements.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine customer requirements	1.1. Customer is consulted to determine requirements 1.2. Examples of furnishing styles and materials are shown to the customer 1.3. Limitations and benefits of styles and materials are explained 1.4. Options for the use and modification of styles or materials are defined and proposed to the customer 1.5. Product requirements are explored, taking into consideration design parameters, material, process, quantity, cost and outcome requirements 1.6. Cost and feasibility of customer requirements/options is evaluated
2. Match options to customer requirements	2.1. Customer specifications/standards and user requirements are compared to furnishing styles and materials options 2.2. Range of best fit styles and materials are presented to the customer for evaluation 2.3. Customer queries are answered and examples used to illustrate answers
3. Document requirements	3.1. Requirements are confirmed and/or approved in the appropriate format 3.2. Specification details are established and confirmed, including quality standards in accordance with enterprise procedures 3.3. Required completion date and any delivery requirements are documented 3.4. Special instructions to production team are added where required 3.5. Appropriate cost details are incorporated when necessary

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to furnishing styles and materials, including the relevant technical, regulatory, cultural, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements and the oral and written reporting of outcomes to the client
- plan and organise activities to access products, equipment, systems and materials to avoid any backtracking, interruptions or communication break-downs
- work with other and in team by recognising dependencies and using cooperative approaches
- use mathematical ideas and techniques to correctly complete measurements, calculate area and dimensions, create accurate and scaled drawings, estimate material requirements and calculate costs
- create and apply systematic problem solving techniques to anticipate problems, avoid re-working and avoid wastage
- use the workplace technology related to the matching process, including computer-aided systems

Required knowledge

- the range of company products, market, work systems and equipment
- relevant furnishing styles and materials
- company business policies and plans, including procedures for product modification and product development
- legislative requirements of the work activities

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Locate, interpret and apply relevant information • Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment • On two occasions involving different products, match furnishing style/materials to meet customer requirements and: <ul style="list-style-type: none"> • evaluate design and design requirements • evaluate furnishing styles and materials and compare them to customer requirements • suggest improvements to stock line designs and materials and where appropriate, negotiate changes • identify the impact of decisions in terms of commercial, environmental and safety risks • Work effectively with others
<p>Resource implications</p>	<p>Product lists, furnishing style catalogues or references and customer requirements.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit covers the work involved in matching furnishing style/materials/costs to meet a customer's order
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate conceptual ability, discretion, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • The matching of furnishing style/materials to meet a customer order is undertaken in accordance with established enterprise procedures and practices • Work is generally performed with little external assistance and with minimal supervision or direction • Customers may be internal or external
Information and procedures	<ul style="list-style-type: none"> • Customer requirements • Product and style catalogues • Work procedures/instructions • Manufacturer/designer specifications and instructions • Organisation work specifications and requirements • Legislation/regulations/national and industry codes and practices relevant to the product • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT4010B Identify and calculate production costs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to estimate materials, labour and time requirements and establish costs for the provision of products, including all overheads.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Gather information	1.1.Details of the particular product and competition products are obtained 1.2.Details of the proposed production operation are obtained and analysed 1.3.Labour unit cost projections are obtained and agreed 1.4.Logistic support contracts, supply agreements or equivalent are obtained and analysed 1.5.Details of proposed warehousing and physical distribution systems and related cost factors are obtained 1.6.Information is converted to usable form and stored ready for retrieval and application
2. Estimate materials and labour	2.1.Types and quantities of materials required for production are estimated and recorded 2.2.Time requirements for production activities and other lead times are estimated 2.3.Labour requirements for direct production and handling operations are estimated and recorded
3. Determine/calculate overheads	3.1.Components contributing to overhead costs are identified 3.2.Overhead costs to be attributed to work in accordance with commercial and enterprise procedures are identified
4. Calculate costs	4.1.Total materials costs and labour costs are calculated in accordance with enterprise procedures 4.2.Total production cost is calculated, including overheads and mark-up percentages 4.3.Final cost to customer is calculated in conjunction with marketing/sales personnel
5. Document details and verify where necessary	5.1.Details of costs and charges are documented in accordance with enterprise practice 5.2.Costs, calculations or other details are verified by other enterprise personnel, as required 5.3.Details are documented for future reference in accordance with enterprise practice

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to production costing including the relevant technical, commercial, industrial and accounting requirements
- communicate ideas and information to enable clarification of the production and related requirements and to present the outcomes in an appropriate manner
- plan and organise activities to avoid backtracking and re-working of solutions
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly estimate and validate labour, materials and on-costs and calculate production costs
- create and apply systematic problem solving techniques to anticipate costing problems, avoid re-working and avoid wastage
- use the workplace technology related to costing, including calculators and measuring devices and computing/computer-aided systems

Required knowledge

- production systems documentation processes
- enterprise costing procedures
- mathematical formulae and processes relevant to costing
- components of labour costs
- enterprise/commercial approach to overhead costs
- enterprise/commercial approaches to warehousing and physical distribution costs
- enterprise information management processes, including storage requirements

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- For a significant mass production operation, determine the production and product costs using the following or equivalent steps:
 - obtain all information relevant to the determination of costs
 - interpret plans, specifications and instructions for production and materials to be used
 - estimate quantities of materials required
 - determine the types and amount of labour required to complete the work
 - estimate time required to complete the work
 - determine/calculate overheads
 - document the process and outcomes
- Work effectively with others

Resource implications

Access is required to real or appropriately simulated situations involving estimation and costing of production operations and products.

Access is required to specifications and costs of relevant equipment and materials and information on labour costs and availability, on costs, safety costs, regulations, quality standards, and enterprise procedures.

Access is required to all necessary facilities and associated equipment, including calculators, computers and relevant software.

Method of assessment

Assessment methods must confirm consistency or the potential for consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of performance and samples of work outcomes and questioning on underpinning knowledge.

Assessment may be conducted over time and may be in conjunction with assessment of other units of

EVIDENCE GUIDE	
	competency.
Context of assessment	Assessment may occur on the job or in a simulated workplace facility with a relevant scenario, simulated work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • Work involves the estimating and costing of production and products in a significant mass production environment • Work may involve referral of matters to other enterprise personnel
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate organisational and administrative ability, discretion, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • Work undertaken in accordance with established procedures involving a range of products, equipment and installation sites • Interaction with customers and other personnel from the operator's workplace • Use of relevant tools, equipment and resources, including: <ul style="list-style-type: none"> • measuring equipment • product sales literature • product samples
Overhead costs	<p>Overheads may be calculated for a specific product or be a constant component based on historical records and may include such costs as rental/lease costs, utilities, non-production resources, depreciation of plant and equipment, warehousing margins, physical distribution unit costs, insurance and other costs incurred by doing</p>

RANGE STATEMENT	
	business
Information and procedures	<ul style="list-style-type: none"> • Enterprise production plan and schedule • Enterprise financial management policy and procedures • Enterprise policy and procedures for cost and apportioning overheads • Labour employment costs (awards, EBA, contracts) • Material/supply costs (contracts, standing agreements, market rates, warehousing margins) • Physical distribution contracts or arrangements • Australian, international and enterprise quality standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT4011B Purchase materials and consumables

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency of purchasing materials and consumables required for production within a furnishing enterprise, through existing contracts or other formal purchasing arrangements or through local purchase delegation.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify purchasing requirements	1.1. Purchasing requirements are identified from material specifications, orders and instructions in accordance with workplace procedures 1.2. Purchasing requirements are prioritised, where required, in consultation with others 1.3. Quantities, quality of goods, price limitations and delivery requirements are determined or confirmed in consultation with appropriate personnel
2. Source materials and consumables	2.1. Source/s of materials and/or consumables are identified from workplace preferred supplier lists or through networks and knowledge of local and/or overseas suppliers 2.2. Difficulties in supply are reported in accordance with workplace procedures 2.3. Availability of supply is confirmed
3. Check costings	3.1. Alternative suppliers are contacted to check costings 3.2. Actual costs are compared to predicted costs 3.3. Any recommendations regarding alternative suppliers are communicated to appropriate personnel following workplace procedures 3.4. Delegation to order goods/materials/equipment is exercised
4. Purchase materials and consumables`	4.1. Capacity of supplier to meet price, quality and delivery expectations is checked 4.2. Purchase order/list is developed in accordance with workplace procedures 4.3. Order is placed with supplier and delivery schedules are confirmed 4.4. Appropriate orders and invoices are exchanged according to workplace procedures
5. Maintain and monitor material and consumable supplies	5.1. Stock is regularly monitored using inventory records and physical checks, where applicable, to ensure maintenance of supply 5.2. Up-to-date records of materials and consumables are maintained 5.3. Acquisition requirements are documented in accordance with workplace procedures
6. Liaise with other departments	6.1. Communication channels with other departments are established in accordance with workplace procedures

ELEMENT	PERFORMANCE CRITERIA
	6.2. Liaison with other departments is conducted to ensure customer requirements are achieved

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to the purchasing systems and activities, including the relevant technical, regulatory, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of purchasing with site supervisor, other workers and customers, and the reporting of outcomes and problems
- plan and organise activities to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly, calculate and estimate material requirements
- create and apply systematic problem solving techniques to anticipate purchasing problems, avoid re-working and avoid wastage
- use the workplace technology related to the purchasing, including calculators and measuring devices and computing/computer-aided systems

Required knowledge

- contemporary supply/purchasing systems theory
- company operating procedures, including procedures for purchasing materials and consumables
- material and consumable usage rates
- operation requirements of equipment and work systems in own work area

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, interpret and apply relevant information
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- Purchase materials on a minimum of four occasions, including two different materials and at least one perishable consumable
- Suggest improvements to purchasing operations and where authorised, negotiate changes
- Modify activities to cater for variations in workplace cultures and environment
- Work effectively with others

Resource implications

Production operation with consumable and material requirements, preferred supplier lists and workplace procedures.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit covers the work involved in sourcing and purchasing materials for production
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate administrative ability, discretion, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • The competency requires a detailed knowledge of the production processes of the enterprise and its support requirements • Work is generally performed with little external assistance and with minimal supervision or direction • Customers may be internal or external
Information and procedures	<ul style="list-style-type: none"> • Work procedures/instructions • Existing contracts or formal purchasing arrangements • Supply system directories, indexes and catalogues • Machinery/equipment/system technical manuals • Legislation/regulations/national and industry codes and practices related to the materials and consumables • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT4012A Prepare a tender submission

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency and skills required to prepare and submit a tender in the furnishing industry.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify opportunity to provide goods and/or services	1.1. Opportunities that are within the operational scope of the business unit or organisation are identified 1.2. Organisational resources which are available, or expertise which may be accessed, is identified and matched to opportunities 1.3. The feasibility of undertaking the proposed project/work is assessed and approval is sought according to organisational policy and procedures
2. Analyse tender requirements	2.1. Tender specifications and scope of tender requirement is identified and clarified with the originator if required 2.2. Proposed methodology for satisfying the request is developed 2.3. Required resources are identified and their availability confirmed with the provider in accordance with organisational procedures 2.4. Methodology is adjusted to accommodate the availability of resources and expertise available
3. Prepare a tender estimate	3.1. Estimate is prepared, taking all requirements into account and providing for contingencies as required by organisational policies, procedures and requirements 3.2. Costing of estimate conforms to organisational policies and procedures 3.3. The estimate satisfies the total requirement. Where this cannot be provided, an explanation/compromise/option is identified 3.4. Estimate is checked for accuracy and detail in accordance with organisational procedures
4. Submit a tender	4.1. Tender is prepared in accordance with organisational policy and procedures 4.2. Tender addresses required details and meets originator's requirements 4.3. Tender is submitted within the required timeframe in the form required by the request 4.4. Organisational requirements for record keeping and documentation of tenders are completed
5. Review tender process	5.1. Changes and variations to the tender are negotiated to meet the needs of the client and the organisation in accordance with contractual arrangements,

ELEMENT	PERFORMANCE CRITERIA
	<p>organisational policy, procedure and delegated authority</p> <p>5.2. The tender content and process is reviewed and evaluated, using the outcome and the feedback provided by client and stakeholders</p> <p>5.3. Procedures are adjusted if required to improve subsequent bids</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to the tendering process, including the relevant legal, technical, regulatory, fiscal, cultural, environmental and safety requirements
- communicate ideas and information in a form which will satisfy the tender brief in clearly understandable terms and also market the offer to the client
- plan and organise activities, including the research, analysis, preparation of the tender to avoid any backtracking or wastage
- work with others in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete calculations relevant to the identification, costing, scheduling and management of the tender
- create and apply systematic problem solving techniques to anticipate tendering problems, avoid re-working and avoid wastage
- use the workplace technology related to tendering, including calculators, computing/computer-aided systems, communications media and presentation aids

Required knowledge

- enterprise operating procedures and requirements
- organisation resources, capacities and capabilities
- tender management, preparation, submission and review processes
- tender evaluation processes
- financial and legal requirements for tendering
- relevant legislation relating to tendering and contracting for goods and/or services of the organisation

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, interpret and apply all relevant information
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- On a minimum of two occasions and for different/significant goods or services, prepare and submit formal tenders that are framed to serve marketing purposes and which address or are supported by:
 - the full requirements of the tender brief
 - total resource requirements
 - total costings covering all components and scenarios
 - appropriate legislative requirements
 - options for the client
- Negotiate changes/variations to tender and conduct review of outcome
- Work effectively with others

Resource implications

Access to Requests for Tender, previous tenders and outcomes, information relating to relevant resources, appropriate staff/advisers and supporting technology.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit scope</p>	<ul style="list-style-type: none"> • This unit covers the work involved in the preparation of tenders to secure work/orders for products • The work requires the analysis of, at times, complex requirements, the preparation and presentation of the tender and the follow-up action for both successful and unsuccessful tenders
<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate analytical ability, discretion, judgement and problem solving skills
<p>Workplace environment</p>	<ul style="list-style-type: none"> • Work is undertaken in accordance with established enterprise procedures and practices • Work is generally performed with little external assistance and with minimal supervision or direction • Customers may be internal or external
<p>Information and procedures</p>	<ul style="list-style-type: none"> • Work procedures/instructions • Tender brief/specifications issued by the requesting agency • Organisation work specifications and requirements • Legislation/regulations/national and industry codes and practices relevant to the product • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT5001B Evaluate and select production materials and equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to research and evaluate the full range of materials and equipment used in furnishing, and to select that most appropriate for each particular specified application, taking into account the availability of and access to production equipment.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine production requirements	1.1. Requirements for production activities are identified, including: 1.2. types of products produced and related materials and equipment 1.3. quantities of products in order, in store, in production 1.4. storage and handling requirements 1.5. stock management methods 1.6. A rating system is developed to facilitate comparisons of cost/benefits and other qualitative properties of equipment and systems
2. Gather data and specifications	2.1. Current best practice and future trends for manufacturing the products are assessed to establish comparisons and benchmarks 2.2. Steps required for production processes are identified and flow charts produced, where necessary 2.3. Specifications are identified to match the production process 2.4. Consultations are conducted with relevant employees and management to identify additional or altered specifications 2.5. Materials, tooling, and/or equipment requirements for the production are identified and documented 2.6. Existing equipment and stock on hand is evaluated to match requirements of the proposed operations 2.7. OHS requirements to provide safe work systems for the equipment and materials are identified, including: <ul style="list-style-type: none"> 2.7.1. associated training requirements 2.7.2. work practices 2.7.3. equipment 2.8. Appropriate data is compiled
3. Evaluate equipment and materials against requirements	3.1. Materials are assessed for required quality, finish, durability and conformity to standards 3.2. Equipment options are identified 3.3. Equipment and materials are selected based on comparisons of performance, cost and specifications compared to the prepared rating system

ELEMENT	PERFORMANCE CRITERIA
4. Prepare report and recommendations	4.1. Recommendations are developed to meet requirements of the workplace 4.2. Report of recommendations is prepared and forwarded according to workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to production materials and equipment, including the relevant technical, regulatory, cultural, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of work with managers/supervisors, workers and customers, the coordinated evaluation of options and the reporting of outcomes
- plan and organise activities, including the systematic identification, research and evaluation of options
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly model the options and statistically compare results and potentials
- create and apply systematic problem solving techniques which will avoid re-working and wastage
- use the full scope of available workplace technology related to production materials and equipment and to their analysis and evaluation

Required knowledge

- industry sector developments and trends in terms of materials and equipment
- company business policies and plans, including future production systems and products
- company products, market, work systems and equipment
- legislative requirements of the work activities

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, interpret and apply relevant information
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- Lead others and work effectively to improve production quality and outcomes
- Evaluate materials, equipment and work processes considering:
 - product innovations and potential
 - nature of products produced and the associated markets for the products
 - workforce availability and capabilities
 - equipment capabilities and availabilities
 - cost benefit analysis (or equivalent)
- Identify the impact of decisions in terms of commercial, environmental and safety risks
- Encourage participation of employees in the planning of work activities and changes

Resource implications

Access to production plans, process machinery, equipment, materials and a work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and/or samples and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • This unit covers the work involved in evaluating and selecting the materials and equipment required in the production process • The unit applies to those with responsibility for resource coordination and leadership of others individually and in teams
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate conceptual and analytical ability, discretion, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • The function is undertaken in accordance with established enterprise procedures and practices may include requirements recommended by manufacturers • Customers or suppliers may be internal or external
Machines/equipment may include:	<ul style="list-style-type: none"> • any machine typically used in the furnishing industry • microprocessor or computer-controlled machines • both production and facility equipment used in the enterprise
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices</p>
Information and procedures	<ul style="list-style-type: none"> • Trade journals and publications

RANGE STATEMENT

	<ul style="list-style-type: none"> • Work procedures/instructions • Manufacturer specifications and instructions • Standard forms of workplace process and procedure • Organisation work specifications and requirements • Legislation, regulations and codes of practice • Quality and Australian standards and procedures
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Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT5002B Establish and develop production processes and area layout

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to establish the production processes, including jointing, fabrication, assembly and finishing, and area layouts to optimise production potential.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify production area objectives	1.1. Production objectives are clearly and unambiguously identified and clarified in conjunction with design, engineering, production and other relevant staff in accordance with company requirements 1.2. Production area processes and specifications are identified
2. Determine production staffing and resource requirements	2.1. Production staffing requirements are determined based on task requirements and necessary competencies 2.2. Suitable staff and/or contractors are selected based on competence and availability in accordance with company requirements 2.3. Required materials, tools, equipment, assembly or fabrication jigs and other physical resources needed for the production are identified and a specification drawn up detailing the required quality and quantities 2.4. Costings of staffing and resource requirements are developed in accordance with company procedures
3. Establish the area layout and process	3.1. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 3.2. Layout of equipment, materials and other factors take account of area layout work plans, recognising the resourcing available and factors of cost effectiveness and efficiency 3.3. Production area tasks and component activities are clearly identified and specified and staff assigned to them based on their competence, experience and availability 3.4. The production team is briefed and trained on their respective roles and responsibilities in accordance with company procedures
4. Review production progress and outcomes	4.1. Production progress is closely monitored against required quality of products and adherence to both budget and time schedule and reported to appropriate personnel in accordance with company requirements 4.2. Opportunities for preventative or corrective changes are identified using outcomes of monitoring activity or feedback from production staff 4.3. Preventative or corrective action is recommended and implemented where appropriate

ELEMENT	PERFORMANCE CRITERIA
	<p>4.4. Changes are communicated to relevant personnel in a logical and easily understood manner</p> <p>4.5. Changes are monitored to confirm improvement to production efficiency</p> <p>4.6. Adequate records are maintained of all key information pertaining to the production process in accordance with company requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to production processes and area layout, including the relevant technical, regulatory, cultural, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of work with managers and supervisors, workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment, systems and materials to avoid any back tracking, workflow interruptions or wastage
- work with others to foster the team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, dimensions and flow, and estimate material requirements
- create and apply systematic problem solving techniques to anticipate production processes and area layout problems, avoid re-working and wastage
- use the workplace technology related to production processes and area layout, including machinery, tools and equipment, calculators and measuring devices and computing/computer-aided systems

Required knowledge

- process engineering techniques and systems
- production and manufacturing processes applicable to the product
- materials handling techniques and options
- equipment and machines to be used to achieve business outcome
- business processes used in workplace
- resource availability, including competencies of individuals in the team/group

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- For a significant production process, either establish the process and area layout or review and make recommendations on an existing process. In either case:
- identify/confirm production area objectives
- determine production staffing and resource requirements
- establish the area layout and process
- monitor and review achievements
- document the outcomes
- Communicate and consult effectively with team members, management and user departments

Resource implications

The resources should relate specifically to the business policies, procedures and range of products and equipment. Resources may include:

- the business environment
- relevant documentation
- legislation and statutory requirements
- industry codes of practice
- OHS legislation, regulations and codes of practice
- access to a work team

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • This unit covers the work involved in establishing the production processes and area layout in the furnishing industry • The unit may require workflow analysis, planning and modification in a new or existing plant layout situation • The function is undertaken in accordance with established enterprise procedures and practices may include requirements recommended by manufacturers
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate conceptual ability, discretion, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • Work may involve individual and team related activities and will normally relate to the standard forms of activity performed in the enterprise and industry • Work is performed with minimal supervision or direction • Customers or suppliers may be internal or external
Machines/equipment may include:	<ul style="list-style-type: none"> • any machine typically used in the furnishing industry • microprocessor or computer-controlled machines • both production and facility equipment used in

RANGE STATEMENT	
	the enterprise
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • hand tools • other equipment
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • timber • metal alloys • fabric • glass • plastics and a full range of consumables required for production
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Work procedures/instructions • Manufacturers' specifications and instructions • Standard forms of workplace process and layout • Organisation work specifications and requirements • Legislation/regulation/national and industry codes and practices relevant to the product • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT5003B Manage installation and commissioning of equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to plan and manage the installation and commissioning of equipment in a manner which minimises disruption and facilitates continuing optimum production outcomes.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare work	1.1. Items to be included in work plan and specification document are identified and confirmed 1.2. Legal, environmental and OHS requirements related to installation and commissioning of equipment/systems are identified 1.3. Work plan for installation and commissioning of equipment/systems is drawn up, including management and reporting procedures 1.4. Specification document is prepared according to workplace and/or manufacturer procedures
2. Coordinate and monitor installation arrangements	2.1. Arrangements for the installation and commissioning of equipment, including necessary legal, insurance and safety requirements are coordinated in accordance with workplace and/or legislative procedures 2.2. Contract arrangements for the installation and commissioning of equipment/systems are coordinated in accordance with workplace procedures 2.3. Installation process, including testing, is monitored to ensure compliance with contractual requirements 2.4. Variations are dealt with to ensure installation meets specification requirements
3. Manage installation schedules and budgets	3.1. Installation process is monitored to ensure compliance with installation specifications, schedule and budget 3.2. Scheduling and budgeting processes are adjusted where variations or alternative plans are indicated 3.3. Deviations are documented and reported
4. Administer legal, environmental and occupational health and safety requirements	4.1. Formal processes of the organisation are used to document the administration of regulatory requirements 4.2. Legal, environmental and OHS requirements related to installation and commissioning of equipment/systems are defined 4.3. Monitoring of the process is carried out to ensure compliance with legal, environmental and occupational health and safety requirements related to installation and commissioning of equipment/systems

ELEMENT	PERFORMANCE CRITERIA
5. Conduct trials to confirm operating status of equipment	5.1. Machine operations are evaluated in a trial run and results confirmed against requirements 5.2. Machines are adjusted to achieve performance outcome specifications 5.3. Employee duties are communicated to match equipment operating requirements 5.4. Maintenance documentation is completed and processed 5.5. Process and machine specification documentation is completed and appropriate records maintained
6. Assess and report on completion of installation	6.1. Completed work is assessed to confirm required specifications have been met 6.2. Report on work completed is prepared in accordance with enterprise procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to the installation and commissioning, including the relevant technical, regulatory, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of work with managers, supervisors, workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment, systems and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and dimensions and estimate material requirements
- create and apply systematic problem solving techniques to anticipate installation and commissioning problems, avoid re-working and wastage
- use the workplace technology related to installation and commissioning, including machinery, tools and equipment, calculators and measuring devices and computing/computer-aided systems

Required knowledge

- risk management process
- requirements for installation and commissioning of equipment
- extent of responsibility for each stage of the process
- company business policies and plans, including procedures for equipment installation
- company products, market, work systems and equipment
- legislative requirements of the work activities

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, interpret and apply relevant information
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- Manage the installation and commissioning of a significant equipment within a production or simulated production environment, including the following tasks:
 - identify the impact of decisions in terms of commercial, environmental and safety risks
 - plan and arrange equipment installation and commissioning
 - lead others and work effectively to arrange for installation and commissioning of equipment
 - allocate tasks considering:
 - competency requirements for the work
 - requirements of workplace operating procedures
 - complete post installation trials and evaluation
- Work effectively with others

Resource implications

Equipment for installation, installation and commissioning service providers.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit scope</p>	<ul style="list-style-type: none"> • This unit applies to the planning and management of equipment installation and commissioning in the furnishing industry • The installation and commissioning may follow an established process or it may require a unique process to cover a one-off situation • The work may involve a multi-disciplinary group, including those with specific regulatory authority for aspects of the work
<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate organisational ability, discretion, judgement and problem solving skills
<p>Workplace environment</p>	<ul style="list-style-type: none"> • Work is generally performed within a team or group environment, but may be on a one-to-one basis with a client or client group • Work is performed with minimal supervision and direction • Customers or suppliers may be internal or external
<p>Machines/equipment may include:</p>	<ul style="list-style-type: none"> • any machine typically used in the furnishing industry • microprocessor or computer-controlled machines • both production and facility equipment used in the enterprise

RANGE STATEMENT	
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Work procedures/instructions • Manufacturer specifications and instructions • Standard forms of workplace process and procedure • Organisation work specifications and requirements • Legislation/regulations/national and industry codes and practices relevant to the product • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT5004B Develop and document procedures and specifications

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to analyse requirements and to develop and document procedures and specifications that provide concise and unambiguous direction and guidance for workplace activities.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify relevant requirements	1.1. Information required for operating procedures is identified and assembled 1.2. Specification requirements and format are established and confirmed, where necessary 1.3. Requirements for information entry, storage, output and quality of document production are identified in accordance with enterprise procedures 1.4. Document and work sheet design is appropriate for efficient entry of information and maximised appearance and presentation of document 1.5. Range of functions incorporated the document design reflects the nominated requirements
2. Prepare specifications	2.1. Specifications are written in an appropriate format, to ensure requirements can be met 2.2. Special needs are incorporated in the specifications 2.3. Specifications are written in a manner that is clear and understood in the workplace
3. Prepare standard operating procedures and/or manuals	3.1. Documentation is prepared to formalise processes for achieving the enterprise objectives 3.2. Responsibility for all updates and changes to the procedures or manuals is assigned or designated
4. Review procedures and specifications against standards	4.1. Compliance with procedures and specification requirements is monitored in relation to the required application 4.2. Results are assessed, reported and/or acted upon according to enterprise procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to the target subject, including the relevant technical, regulatory, cultural, environmental and safety requirements
- communicate ideas and information clearly and concisely so that all users can interpret and follow the procedure/specification
- plan and organise activities to avoid any back tracking or workflow interruptions
- work with others to foster the team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete or confirm measurements and calculations required for the procedure/specification
- create and apply systematic problem solving techniques to anticipate procedural problems, avoid re-working and wastage
- use the workplace technology related to the development and production of procedures and specifications

Required knowledge

- technical writing and presentation techniques
- company operating procedures, including procedures for documenting and changing specifications and procedures
- operation requirements of equipment and work systems in own work area

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, interpret and apply relevant information
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- Identify and itemise steps and stages in processes and procedures
- Complete a significant operational procedure, incorporating safety obligations, and covering:
 - full analysis of the topic area
 - step-by-step operational procedure
 - specification which is part of the procedure or a supporting document
- Modify activities to cater for variations in workplace cultures and environment
- Work effectively with others

Resource implications

Enterprise or equivalent formats for procedures/specifications and subjects/topics.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

This unit covers the work involved in the writing of specifications and procedures for the workplace, including:

- operating procedures
- complex cutting lists and specification sheets

The function is undertaken in accordance with established enterprise procedures and practices may include requirements recommended by manufacturers

Unit context

- OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate conceptual ability, discretion, judgement and problem solving skills

Workplace environment

- Work may involve individual and team related activities and will normally relate to the standard forms of activity performed in the enterprise and industry
- Work may be on a one-to-one basis with a client or client group
- Customers or suppliers may be internal or external

Machines/equipment may include:

- any machine typically used in the furnishing sector concerned
- microprocessor or computer-controlled machines
- both production and facility equipment used in

RANGE STATEMENT	
	<p>the enterprise</p> <ul style="list-style-type: none"> Tools and equipment may be involved
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> Work procedures/instructions Manufacturer specifications and instructions Standard forms of workplace process and layout Organisation work specifications and requirements Legislation/regulations/national and industry codes and practices relevant to the procedure/specification Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT5005B Organise enterprise maintenance programs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to establish, organise and implement preventative and reactive maintenance programs and capabilities required to optimise operational and production performance.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Clarify maintenance requirements	1.1. Equipment specifications, service requirements and workplace procedures are checked for recommended maintenance intervals and processes 1.2. Special requirements for maintenance are separated from normal lubrication, adjustment and maintenance schedules 1.3. Comparisons with previous experience, future equipment use, production requirements and standard operating procedures are made 1.4. An outline plan for maintenance and a related work schedule is identified and developed
2. Establish maintenance systems	2.1. Costings for process are identified based on work schedule (equipment/staff off-line), equipment manufacturers' recommendations, charges for materials, equipment and consumables and external/internal labour charges 2.2. Required production interruptions, processes and procedures are documented and recorded 2.3. Maintenance providers, internal/external, are identified 2.4. Maintenance systems options are analysed and recommendations processed to management 2.5. Approvals for the maintenance systems concepts and resources are obtained
3. Organise maintenance activities	3.1. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 3.2. Production schedules and staff rosters are checked to identify times when the maintenance process may be scheduled, including optimum timing for shut down 3.3. Permission from supervisory personnel is obtained for timing of maintenance to optimise the maintenance process and production 3.4. Detailed work plans are developed in accordance with: <ul style="list-style-type: none"> 3.4.1. production schedules 3.4.2. availability of expertise 3.4.3. scheduling of resource availability 3.5. Employees with the required competencies are identified and where necessary appropriate training

ELEMENT	PERFORMANCE CRITERIA
	<p>and assessment is facilitated</p> <p>3.6. Approvals for production schedule, employee work pattern and maintenance schedule adjustments are obtained</p> <p>3.7. Work plan is refined to ensure the maintenance program will maintain workplace outputs in terms of workplace policy</p>
4. Resource maintenance requirements	<p>4.1. Consumables, equipment and expertise are located and coordinated to meet maintenance work schedule</p> <p>4.2. Externally sourced equipment, consumables and expertise are identified and appropriate arrangements made for procurement</p>
5. Complete maintenance procedures	<p>5.1. The maintenance work schedule is completed following the work plan</p> <p>5.2. Appropriate readings, measurements and recordings are made and compared to equipment, product and other relevant specifications</p> <p>5.3. Areas requiring further testing are identified and appropriate procedures for testing recommended to supervisory staff</p> <p>5.4. Appropriate adjustments to the work schedule plan are made based on experience and documentation completed</p> <p>5.5. Maintenance records are completed and forwarded to appropriate personnel</p> <p>5.6. Areas where changes to equipment operation or routine maintenance are required to maintain optimum work output and equipment life are noted</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to equipment maintenance systems, including the relevant technical, regulatory, cultural, environmental and safety requirements
- communicate ideas and information to enable the documentation and clarification of the maintenance requirements, coordination of work with site managers and supervisors, workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the allocation of human resources and the obtaining of equipment, systems and materials to avoid any backtracking, workflow interruptions or wastage
- work with others to foster the team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly identify and establish the statistical basis for the management and monitoring of maintenance programs
- create and apply systematic problem solving techniques to anticipate maintenance problems, avoid re-working and avoid wastage
- use the workplace technology related to maintenance, including machinery, tools and equipment, calculators and measuring devices and computing/ computer-aided systems

Required knowledge

- contemporary equipment maintenance theories covering benefits and costs
- the effects of production schedules, time and resource requirements when scheduling the maintenance process
- risk analysis processes
- company operating procedures, including procedures for maintenance
- operation requirements of equipment and work systems in the work area
- competency requirements of the work activities
- relevant OHS requirements

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, interpret and apply relevant technical and production information
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- To establish the maintenance program for a real or simulated significant production operation, including:
 - coordination of maintenance within the context of production schedules
 - identification of resource requirements for maintenance, including skills of employees involved
 - recording and reporting requirements to provide system visibility and accountability potential
- Complete a benefit analysis of an existing and significant maintenance program
- Suggest improvements to maintenance operations and where authorised, negotiate changes
- Modify activities to cater for variations in workplace cultures and environment
- Work effectively with others

Resource implications

Access to production information and schedules, equipment specifications and workshop manuals for production process equipment requiring maintenance.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • This unit covers the work involved in establishing, organising and implementing both preventative and reactive maintenance programs in a furnishing enterprise • The competency entails the provision of maintenance with regard for the production schedule and of the plant, equipment and facilities operated by the enterprise
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate organisational ability, discretion, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • The coordination of maintenance is undertaken in accordance with established enterprise procedures and practices and may include manufacturers' recommendations • Work is generally performed with little external assistance and with minimal supervision or direction • Work activities of other employees are supervised and assistance to others is provided • Customers are normally internal
Machines/equipment may include:	<ul style="list-style-type: none"> • any machine typically used in the furnishing sector concerned • microprocessor or computer-controlled machines • both production and facility equipment used in

RANGE STATEMENT	
	the enterprise
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Work procedures/instructions • Manufacturer specifications and instructions • Organisation work specifications and requirements • Legislation/regulations/national and industry codes and practices relevant to maintenance systems • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT5006B Plan production

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to plan and document the overall requirements of production in a furnishing enterprise.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish production requirements	1.1.Data from the sales/market forecast is interpreted for inclusion in the production plan 1.2.Specifications and supporting data are analysed 1.3.Projected requirements regarding product quantity, quality, raw materials and performance characteristics are established 1.4.Production capacity of machines and personnel is determined and/or confirmed 1.5.Resources required, including raw materials supply requirements for the production line, are identified
2. Prepare production plan	2.1.Information and details to include in the production plan are assembled and confirmed, where necessary 2.2.Inefficiencies and constraints are considered and potential improvements or variations to the plan are identified, where applicable 2.3.Production plan is prepared in accordance with enterprise procedures
3. Monitor and coordinate variations to plan	3.1.Production plan is monitored to ensure efficient and effective production performance and any variations required are identified 3.2.Plans are modified, where necessary, to reflect out of stock and overstock situations, machine and human resource requirements or variations 3.3.Implementation of plan variations is coordinated to ensure compliance with instructions/specifications
4. Maintain records	4.1.Production planning records are maintained and reports prepared, where necessary, in accordance with enterprise procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to the production planning, including the relevant technical, regulatory, cultural, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of work with managers, supervisors, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the planning and scheduling of equipment, systems and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and foster the team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete production computations and establish a statistical base for monitoring operational efficiency, and estimate material requirements
- create and apply systematic problem solving techniques to anticipate production planning problems, avoid re-working and avoid wastage
- use the workplace technology related to production planning, including machinery, tools and equipment, calculators, measuring devices and computing/computer-aided systems

Required knowledge

- production processes, products, machines, planning and forecasting software
- work and workplace organisation systems
- suppliers, their capabilities and customer requirements
- safety and environmental aspects of relevant enterprise activities
- workplace procedures and reporting/recording processes
- relevant regulatory requirements and codes of practice

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Interpret/analyse data for production planning • Apply workplace health and safety policies in production operations • For a significant production requirement: <ul style="list-style-type: none"> • establish and confirm the production requirements • prepare the production plan • monitor and coordinate variations to the plan • maintain records • Work effectively with others
<p>Resource implications</p>	<p>Access to real or appropriately simulated production planning situations in a furnishing enterprise context</p> <p>This includes real or simulated work areas, materials, equipment, and information on work specifications, relevant safety procedures and regulations, quality standards, organisation procedures and customer requirements.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts</p> <p>Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- Work involves planning of production in a furnishing enterprise
- The competency will relate to the interface between sales/marketing, purchasing and production areas and may involve dealing with the unpredictability of variables, such as sales, raw materials, machinery availability, operator availability and quality variations
- Production operations may include: repetitive production runs, short runs, quick changes, indent orders, stock replenishment

Unit context

- OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate conceptual, analytical and organisational ability, judgement and problem solving skills

Unit context

- Work may be conducted in a large-scale production or small business situation in one of the following sectors:
 - cabinet making
 - wood machining
 - furniture polishing
 - glass and glazing
 - soft furnishing
 - upholstery
 - bed and mattress making
 - floor covering and finishing

RANGE STATEMENT	
	<ul style="list-style-type: none"> • picture framing and musical instruments • Production planning may include the establishment of an overall plan for manufacture/product delivery in conjunction with marketing/merchandising area • The competency is applied under limited guidance in line with a broad plan, budget or strategy
Workplace organisation systems may include:	<ul style="list-style-type: none"> • just in time • quick response • quality systems • team processes and benchmarking
Machinery/equipment	Machinery/equipment will be that required for the particular sector operations
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Enterprise business plan • Production procedures/flows • Previous production plans • Production and planning policies and other documentation • Machine/equipment manufacturer specifications and instructions • Organisation work orders • Job procedures • Work instructions • Legislation/regulations/national and industry codes and practices relevant to the production environment and processes

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT5010B Optimise CNC operations

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the analysis of production orders, production histories and machine capabilities and the manipulation of machine control programs to optimise production performance.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify optimal operating conditions	1.1. The production potential of the components of the system are identified 1.2. Production orders and plans are analysed to identify sustained production requirements 1.3. Integration options are identified and analysed to ascertain the optimal integration model 1.4. Software and programming requirements to attain and sustain optimal integration are identified and recorded
2. Prepare for software installation	2.1. Program format and operational intent is accurately determined and required applications identified 2.2. Specifications are checked for required operating conditions 2.3. Program instructions are checked for compliance with specifications 2.4. Software timers are set to specification where required
3. Install and integrate automatic process machine control programs	3.1. Appropriate program loading technique is selected 3.2. External loading devices are correctly connected to automatic process machine control systems 3.3. Machine control system is placed in correct operational mode to accept program loading 3.4. Program is downloaded in accordance with manufacturers' recommended procedure and enterprise requirements 3.5. Checks are made during and after downloading to ensure accurate and complete data transfer 3.6. External program loading devices and connections are disconnected from process and machine control system 3.7. Integration protocols and actions are completed
4. Commission automatic process and machine control programs	4.1. Operation of the production system using the programs is observed 4.2. Outputs are checked and measured for compliance with specifications 4.3. External inputs are checked for compliance with specifications, according to specified procedures 4.4. Total operation is checked for compliance with specifications where applicable

ELEMENT	PERFORMANCE CRITERIA
	4.5. Location of program master copy storage is confirmed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to CNC production optimisation, including the relevant technical, regulatory, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of work with site managers, supervisors, and other workers, and the reporting of work outcomes and problems
- plan and organise activities, including the obtaining of systems and materials to avoid any backtracking, workflow interruptions or unnecessary systems downtime
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly calculate flow and systems parameters
- create and apply systematic problem solving techniques to anticipate problems, avoid re-working and wastage
- use the full scope and potential workplace technology related to CNC production operations

Required knowledge

- company operating procedures, including procedures for programming CNC equipment
- operation requirements of equipment and work systems to be programmed

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Locate, interpret and apply relevant information • Apply safety requirements throughout the sequence, including the use of personal protective clothing and equipment • On a minimum of two occasions with at least one involving a CNC Machining and Processing Centre, optimise production, and • Suggest improvements to CNC controlled operations and where authorised, negotiate changes • Modify activities to cater for variations in workplace cultures and environment • Work effectively with others
<p>Resource implications</p>	<p>CNC production equipments, software, production materials and a production plan/schedule</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency or the potential for consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation and questioning on underpinning knowledge.</p> <p>Assessment may be conducted over time and may be in conjunction with assessment of other units of competency</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • This unit covers the work involved in optimising CNC process and machine control programs used in the furnishing industry. It requires the integration of process machines that may normally function on a stand-alone basis. • The optimisation of CNC programs is undertaken in accordance with established enterprise procedures and practices may include requirements recommended by manufacturers/developers
Production systems	Production systems are to include CNC machining and processing centres
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate analytical and organisational ability, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • Work is generally performed without other qualified assistance • Customers are normally internal
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Enterprise production plans and schedules • CNC and production systems manufacturers' specifications and instructions • Standard form of installing and commissioning

RANGE STATEMENT

	<p>CNC programs</p> <ul style="list-style-type: none"> • Organisation work specifications and requirements • Legislation/regulations/national and industry codes and practices relevant to the installation and commissioning • Quality and Australian standards and procedures
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Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT5011B Develop, trial and evaluate prototypes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the development of specifications, the identification and selection of materials and processes, the production and trialing of prototypes and the completion of evaluation documentation.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop prototype specifications	1.1. The purpose and outline requirements for the prototype are identified from design concepts and/or customer requirements 1.2. Materials are identified following detailed analysis of the options 1.3. Detailed prototype design specifications are prepared and documented 1.4. Construction requirements and methods are identified appropriate for the materials to be used 1.5. Ergonomic requirements are identified, clarified and satisfied throughout the work process
2. Plan and prepare prototype construction	2.1. Work plan for the prototype construction is drafted 2.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 2.3. Compatibility of materials in specifications is checked and any discrepancies reported 2.4. Steps or stages in construction are identified, noting checkpoints for quality checks 2.5. Suitable work area is located and cleared ready for work 2.6. Materials and consumables to meet specifications are prepared for use 2.7. Equipment and accessories suitable for working the specified material are prepared for use 2.8. Appropriate jigs and other construction aids are identified and where required adjusted to suit the work
3. Produce the prototype	3.1. Work plan is followed to produce the prototype 3.2. Checks are conducted at the identified points 3.3. Modifications to designs and plans are identified and recommended and managed within workplace procedures 3.4. Modifications to the plan are documented and followed 3.5. Prototype or sample is checked for compliance with specifications
4. Trial and evaluate the prototype	4.1. Trial objectives and processes are developed, specified and documented

ELEMENT	PERFORMANCE CRITERIA
	<p>4.2. Personnel involved in the trial and evaluation are prepared for their responsibilities and functions</p> <p>4.3. Trial equipment, tools and materials are prepared and certified prior to use</p> <p>4.4. Prototype trials are conducted and results captured and recorded in accordance with the trial specification</p> <p>4.5. Results of trials are evaluated and evaluation records and recommendations are processed in accordance with enterprise procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to the prototype development including the relevant technical, regulatory, environmental and safety requirements
- communicate ideas and information to enable clarification of the development requirements, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment, systems and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and dimensions, create accurate and scaled drawings, and estimate material requirements
- create and apply systematic problem solving techniques to anticipate problems, avoid re-working and wastage
- use the workplace technology related to the development, including calculators and measuring devices and computing/computer-aided systems

Required knowledge

- intellectual property law requirements
- the elements and principles of design
- trends and detailed knowledge of furniture construction
- destructive and non-destructive testing techniques and processes
- use of colour and other features
- the range, properties and characteristics of materials used
- safety and environmental aspects of relevant enterprise activities
- workplace procedures and reporting process
- relevant OHS legislation, regulatory requirements and codes of practice

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order, plans and specifications and locate and apply relevant information
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment or products
 - maintain required production output and product quality
 - minimise the risk of injury to self or others
- Develop and evaluate a minimum of two different prototypes and:
 - develop the prototype specification
 - identify compatibility/incompatibility of materials, adhesives, fittings, fasteners, for the application
 - select and use appropriate materials, equipment and processes for the item being constructed
 - demonstrate how the design of the prototype components will influence the working lifetime of the item
 - ensure that the prototype satisfies the original or varied specification
 - prepare for and conduct evaluation trials
 - record outcomes and make recommendations for future activities
- Modify activities to cater for variations in workplace contexts and environment
- Work effectively with others

Resource implications

Access to real or appropriately simulated situations involving the development and trialing of prototypes

This includes real or simulated work areas, materials, equipment, and information on design concepts, customer requirements, quality standards, organisation procedures, relevant safety procedures and regulations.

EVIDENCE GUIDE	
Method of assessment	<p>Assessment methods must confirm consistency, or the potential for consistency, of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation or work and questioning on underpinning knowledge.</p> <p>Assessment may be conducted over time and in conjunction with assessment of other units of competency.</p>
Context of assessment	<p>Assessment may occur on the job or in a simulated workplace facility with relevant design inputs, staff, process equipment, simulated work procedures and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit scope</p>	<ul style="list-style-type: none"> • This unit covers the work involved in developing, constructing, trialing and evaluating prototypes from design concepts and/or customer requirements • Prototypes may be produced by hand, by using appropriate machines, tools and equipment or by computer assisted production and will reflect the finished products produced by the enterprise
<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate conceptual, analytical and organisational ability, discretion, judgement and problem solving skills
<p>Workplace environment</p>	<ul style="list-style-type: none"> • The development and trialing of prototypes is undertaken in accordance with established enterprise procedures and practices • This work may be carried out on a team basis or with the support of dedicated specialist personnel • Customers may be internal or external
<p>Machines/equipment may include:</p>	<ul style="list-style-type: none"> • any machine typically used in the furnishing sector concerned • microprocessor or computer-controlled machines • both production and facility equipment used in the enterprise

RANGE STATEMENT	
Materials for prototypes	<ul style="list-style-type: none"> • those normally used by the enterprise in its production processes. They may include but are not limited to: <ul style="list-style-type: none"> • timber • metal alloys • glass • fabrics and textiles • plastics • leather • cardboard and paper • adhesives • fillers and finishes as appropriate
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Design concepts/customer requirements • Designer's/drawer's specifications and instructions • Work procedures/instructions • Organisation work specifications and requirements • Legislation/regulations/national or industry codes and practices relevant to the prototype/sample construction • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT5012B Determine production feasibility of designs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to systematically analyse, assess and determine the feasibility of designs for translation into commercially viable production.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Define the design objectives and detail	1.1. The purpose of the design is defined and/or clarified 1.2. The potential market for the design product is considered and defined 1.3. Intended production materials and outline production processes are identified and agreed as the basis for determination
2. Establish the design assessment criteria	2.1. Criteria for the assessment of production material options are established 2.2. Criteria for the assessment of product functionality are established 2.3. Criteria for the assessment of production process options and impacts of these on overall business operations are established 2.4. Criteria for the assessment of safety and potential liability issues are established 2.5. Criteria for assessment of costs and marketability are established
3. Apply the assessment criteria	3.1. The determination process, including personnel, information/input collection and recording, scoring or grading criteria and decision making processes are established and agreed 3.2. Products which are competitors/potential competitors in the market place are selected for comparative purposes 3.3. The design is scored/graded against agreed criteria and the results recorded 3.4. Competition products are scored/graded against the agreed criteria and the results recorded 3.5. Assessment results are completed in accordance with the agreed process
4. Determine feasibility and options	4.1. Assessment results of the design and competition products are analysed 4.2. Designs which fail to satisfy assessment and provide no optional potential are rejected 4.3. Designs which fail to satisfy assessment but which have optional/alternative potential are referred to the appropriate party 4.4. Designs which satisfy potential are conditionally endorsed, with the conditions being recorded and passed to the appropriate party

ELEMENT	PERFORMANCE CRITERIA
	4.5. Formal records of the determination are completed and processed in accordance with enterprise procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to the design, including the relevant technical, regulatory, cultural, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of work with team members and the reporting of work outcomes and problems
- plan and organise activities to avoid any back tracking or reworking requirements
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete calculations necessary to support the determination process
- create and apply systematic problem solving techniques to anticipate problems, and avoid unsubstantiated decisions
- use the workplace technology available to assist in the administration of the determination system, including computing/computer-aided systems

Required knowledge

- intellectual property law requirements
- design core and professional practices
- ergonomic principles for furniture design and manufacture
- the elements and principles of design and how they can be used to create good design in the furnishing industry
- the industry and detailed knowledge of contemporary products
- range of product materials and their characteristics
- materials, trims, accessories and their properties and characteristics
- costing processes
- workplace procedures and reporting process
- relevant OHS legislation, regulatory requirements and codes of practice

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, access and interpret all required information
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- For a minimum of two different product designs, determine and report on their feasibility by completing the following or equivalent steps:
 - define the design objectives and detail
 - establish assessment criteria
 - apply assessment criteria impartially
 - determine feasibility options
- Communicate effectively with team and customers
- Maintain accurate records
- Work effectively with others

Resource implications

Access to real or appropriately simulated situations involving the feasibility of designs.

They may include real or simulated work areas, materials, equipment, and information on work specifications, customer requirements, relevant safety procedures and regulations, quality standards and enterprise procedures.

Method of assessment

Assessment methods must confirm consistency, or the potential for consistency, of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of work activities and questioning on underpinning knowledge.

Assessment may be conducted over time and may be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant background information, simulated work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- Work involves the establishment and application of systematic, fair and balanced processes to determine the production feasibility of a design.
- Activities may include:
 - researching design trends and developments
 - generating and presenting ideas
 - liaison with client and/or other functional areas
 - compiling information
 - preparing costings
- Judgement may be required in planning and selecting appropriate processes or procedures for self and others

Unit context

- OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate conceptual, analytical and organisational ability, discretion, judgement and problem solving skills

Workplace environment

- The competency can refer to enterprise and client initiated ideas or requests
- The competency may involve applications associated with original design, adaptation of designs or interpretation of sketches, single or multiple production styles and ranges, and made to order
- The competency is applied under broad guidance

RANGE STATEMENT**Information and procedures**

- Enterprise business plans
- Business reports, trade journals, etc.
- Product research information covering trends, materials options and market coverage
- Organisation work procedures
- Legislation/regulations/national and industry codes and practices relevant to furnishing and ergonomics
- Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT5013B Develop products and related processes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to define requirements, to confirm feasibility, to develop and trial options and to analyse and report on proposed products and related processes.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess product feasibility	1.1. Provisional specifications are identified and interpreted, in consultation with others, where required 1.2. Provisional specifications are subject to feasibility modelling and analysis 1.3. Recommendations from the feasibility study are processed
2. Participate in developing/engineering prototype product	2.1. Product or process specifications are interpreted and/or preliminary specifications are developed from the feasibility study 2.2. Specifications are used to develop or engineer the prototype product 2.3. Results are analysed and decisions to move to a trial are confirmed
3. Conduct trials	3.1. Trial procedures/parameters are established and recorded 3.2. Organisation and liaison issues with production areas are resolved 3.3. Raw materials are checked or selected and machines and skill availability allocated against requirements 3.4. Trials are carried out in accordance with the established procedures
4. Analyse, interpret and report results	4.1. Results of the trials are analysed to determine performance and acceptability for production 4.2. Variations and improvements necessitated by the findings are recorded and/or trialed 4.3. Reports and recommendations are prepared and processed in accordance with enterprise procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to product and process development, including the relevant technical, regulatory, cultural, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements, coordination of work with managers, supervisors, team members and customers, and the reporting of work outcomes and findings
- plan and organise activities, including the allocation and coordination of functions and the obtaining of equipment, systems and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches
- use mathematical ideas and techniques to correctly complete calculations required to support the product development and to estimate flow and material requirements
- create and apply systematic problem solving techniques to anticipate development problems, avoid re-working and wastage
- use the workplace technology related to development, including machinery, tools and equipment, calculators and measuring devices and computing/computer-aided project management systems

Required knowledge

- intellectual property obligations and codes of practice
- products and process development processes and procedures
- team management and coordination processes
- recording and reporting processes (as they may apply in the enterprise)
- safety and environmental aspects of relevant enterprise activities
- technical background relevant to the sector

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- Either individually or as part of a multi-disciplinary team develop a significant product and related processes, including to:
 - interpret/develop specifications
 - conduct feasibility studies
 - produce prototype
 - organise/conduct trials
 - assess results against specifications
 - communicate effectively with development team and customers
 - prepare reports/presentations
- Work effectively with others

Resource implications

Access to real or appropriately simulated situations requiring the development of products and related processes

This includes real or simulated work areas, materials, equipment, and information on work specifications, relevant safety procedures and regulations, quality standards, organisation procedures and customer requirements.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated

EVIDENCE GUIDE

	work instructions and deadlines.
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- Work involves activities contributing to development of products or processes within the enterprise
- The competency may involve applications associated with original creation, adaptation of designs or interpretation of sketches within contexts related to single or multiple production runs
- Activities may include: work allocation, reviewing/evaluating processes and products, liaising with relevant personnel, client and/or other functional areas

Unit context

- OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate conceptual and analytical ability, discretion, judgement and problem solving skills

Work responsibilities will vary in scope according to:

- size of the workplace
- range of designs
- specialisation in the workplace and workplace quality standards

The competency is used independently within routine and non-routine situations.

Information and procedures

- Work specifications
- Provisional product specifications and design brief
- Provisional marketing strategies

RANGE STATEMENT

	<ul style="list-style-type: none"> • Organisational work procedures • Manufacturers' technical specifications • Legislation/regulations/national and industry codes and practices relevant to the product • Quality and Australian standards and procedures
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Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT5014B Establish and monitor business information systems

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to research, analyse and establish and monitor the business information systems which are required to provide appropriate information visibility to support effective furnishing industry management decisions.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify the need	1.1. Information required for the effective management of the business activities is identified 1.2. An outline information collect plan is developed and enhanced through research and consultation with key players 1.3. The information from the plan is translated into defined information objectives or targets
2. Identify the source and information collection mechanism	2.1. Each information objective is analysed to identify the best source 2.2. Options for mechanisms to collect information from the preferred source are identified and assessed 2.3. The options for information collection mechanisms are selected and recorded
3. Establish systems management processes	3.1. Procedures for each information management process are developed 3.2. Responsibilities for each component of the system are defined, allocated and documented 3.3. Quality assurance specifications, mechanisms and processes are established to maintain system integrity
4. Monitor systems effectiveness	4.1. The collection, flow and accuracy of information is monitored against specifications 4.2. Regular monitoring of the relevance and use of information is carried out 4.3. Ineffective, inefficient or redundant systems are upgraded or dispensed with 4.4. Systems documentation is maintained and current

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to business information systems, including the relevant legal, technical, regulatory, fiscal, cultural, environmental and safety requirements
- communicate ideas and information to enable clarification of the requirements and the unambiguous explanation of business information systems, management, process, quality and maintenance requirements
- plan and organise activities to avoid any backtracking, re-working, interruptions or wastage
- work with others to foster a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to establish or validate information needs and to select statistical and other information presentation methods
- create and apply systematic problem solving techniques
- use the workplace technology to collect, present, maintain and archive business information

Required knowledge

- information management theory
- contemporary information management techniques
- theory and application of statistics
- company business policies and plans, including procedures for reports
- company quality systems and business equipment

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, interpret and apply relevant information
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- Individually, or as a member of a management team, establish a business information system for a significant production/manufacturing business, including:
 - the identification of information needs
 - the identification of source and collection options
 - the development of information management processes (procedures) for significant needs
 - the development of related systems quality assurance specifications, mechanisms and processes
- Review an existing information management process and report on effectiveness and change recommendations
- Work effectively with others

Resource implications

An operational or simulated business environment with responsibilities for all management functions, including logistics, personnel, production, distribution and finance together with supporting business plans and records.

Method of assessment

Assessment methods must confirm consistency, or the potential for consistency, of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.

Assessment may be conducted over time and can be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a simulated workplace facility with relevant management structures, production processes, simulated work instructions and

EVIDENCE GUIDE

	deadlines.
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope	<ul style="list-style-type: none"> • This unit covers the work involved in establishing and monitoring business information systems required to support effective management decisions in the areas of furniture production, services and organisation • The application of information systems will normally be computer assisted, integrated into the enterprise's processes and/or stand-alone
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate analytical ability, discretion, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • Work is generally performed with little external assistance and with minimal supervision or direction. The development of systems may require the assistance and cooperation of others • Customers may be internal or external
Information collection plan	<p>An information collection plan is a generalised title for an instrument which specifies the information required by the organisation, the sources of this information and its uses/users/purpose. It is an iterative development tool</p>
Information management process	<p>An information management process is a procedure related to a particular/individual information objective and will normally cover the purpose, user, specification of the information, the source, the collection mechanism, the frequency of collection,</p>

RANGE STATEMENT	
	presentation format, review triggers and processes, archival management and other management requirements
Information presentation	Information may be presented in the form of reports in written form and/or, mathematical, statistical, graphical or multi-dimensional displays
Information and procedures	<ul style="list-style-type: none"> • Enterprise corporate plan • Enterprise business plans • Enterprise communication plans/strategies • Existing business information systems documentation • Enterprise work specifications and requirements • Legislation/regulations/national and industry codes and practices relevant to the product • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFFT5015B Establish and implement contracts for external goods or services

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit applies to the initiation and completion of contract arrangements with identified suppliers.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Document goods/services to be contracted	1.1. Specifications for the contract are drawn up identifying: <ul style="list-style-type: none"> 1.1.1. goods and/or services to be provided 1.1.2. criteria to be met 1.1.3. financial arrangements 1.2. Contract details are checked for compliance with enterprise purchasing policy or procedures 1.3. Contract is provided to potential suppliers in accordance with the enterprise practices
2. Negotiate contract with supplier	2.1. Requirements of the supply contract are discussed 2.2. Contract specification requirements are understood by the relevant parties 2.3. Areas of ambiguity or concern are clarified and resolved 2.4. Negotiations are undertaken with selected supplier for the contracting of required goods or services on a "without prejudice" basis 2.5. Conditions for supply of goods/services are agreed between the enterprise and the supplier, including the determination of key performance indicators 2.6. Alternative suppliers are negotiated with if agreement is unable to be reached 2.7. Contract price and conditions are negotiated and agreed 2.8. Negotiations conform to established enterprise requirements and relevant legislation
3. Complete contract negotiations	3.1. Contract documentation is drafted in accordance with relevant legislation, enterprise procedures and negotiated conditions of service and supply 3.2. Technical support in the drafting of contracts is accessed where required 3.3. Contract provisions are confirmed internally as required by enterprise practices or purchasing policy 3.4. Contract documentation is signed and exchanged between the relevant parties
4. Complete enterprise contract requirements	4.1. Supply of contracted goods or services is monitored and appropriate financial arrangements are approved 4.2. Workplace approved systems are used to file information to ensure traceability of orders and

ELEMENT	PERFORMANCE CRITERIA
	financial transactions 4.3. Organisational systems that require interaction with suppliers are identified and used where appropriate 4.4. Quality assurance procedures for supplied goods/services are identified and applied 4.5. Information about the contract is communicated to appropriate personnel 4.6. Documentation relating to regulatory requirements, including supplier safety information is obtained and stored in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to contracting, including the relevant legal, technical, regulatory, fiscal, cultural, environmental and safety requirements
- communicate ideas and information in a clear and unambiguous fashion and ensure that all communications satisfy the intent and legal requirements associated with contracting
- plan and organise activities, including the preparation, completion, execution and finalisation of the contract within the specified timeframe and to avoid any back tracking, workflow interruptions or wastage
- work with others in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete calculations required to establish and implement the contract
- create and apply systematic problem solving techniques to anticipate contracting problems, avoid supply difficulties
- use the workplace technology related to contracting, including calculators, computing/computer-aided systems and relevant contracting software

Required knowledge

- enterprise operating procedures and requirements
- organisation resources, capacities and capabilities
- contract management, preparation, submission and review processes
- contract evaluation processes
- financial and legal requirements for contracting
- relevant legislation relating to contracting and contracting for goods and/or services of the organisation

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, interpret and apply relevant information to the contract negotiations and provisions
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- Establish and implement at least two significant contracts covering the following actions/activities:
 - establish the specification of the goods/service
 - identify and access probable suppliers
 - negotiate contracts considering:
 - legal and financial considerations requirements for the contract
 - requirements of workplace policy and procedures
 - discuss contract provisions and provide necessary explanations
 - check contract provisions as required by enterprise procedures
 - finalise contracts and file appropriate documentation
 - identify the impact of contract outcomes in terms of commercial risks
- Suggest improvements to purchasing operations and where appropriate, negotiate changes
- Work effectively with others

Resource implications

Goods or services required to be contracted, appropriate purchase order, formal contact or other documentation, enterprise supply or purchasing policy, suppliers

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.

Assessment should be conducted over time and will

EVIDENCE GUIDE	
	generally be in conjunction with assessment of other units of competency.
Context of assessment	Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • This unit covers the work involved in organising the initiation and completion of contract arrangements with identified suppliers. Contracts are generally in written form • The function is undertaken in accordance with established enterprise procedures and practices may include requirements recommended by manufacturers
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate organisational ability, discretion, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • Work is generally performed on a one-to-one basis with the client or client group • Customers or suppliers may be internal or external • The competency may apply in the workplaces that are involved in the function
Machines/equipment may include:	<ul style="list-style-type: none"> • any machine typically used in the furnishing sector concerned • micro-processor or computer controlled machines • both production and facility equipment used in the enterprise.
Tools	Tools, equipment and spares or consumables may be involved

RANGE STATEMENT	
Information and procedures	<ul style="list-style-type: none"> • Work procedures/instructions • Specification of the required goods or services • Supply system directories, indices, catalogues • Prevailing contract law • Legislation/regulations/national and industry codes and practices relevant to the goods/services • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT5016B Establish customer contracts

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the application of technical communication skills and contractual knowledge to the establishment of contracting goods or services to customers.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish customer needs	1.1. Intended use of goods or services is established in conjunction with the customer 1.2. Implications of customer requests are explained 1.3. Potential options of goods or services are explained describing costs, performance characteristics and implications for use
2. Evaluate available goods and/or services to meet needs	2.1. Information on characteristics of available goods or services is investigated 2.2. Performance characteristics and costs of potential options are compared in relation to customer identified needs and provisional recommendations are made 2.3. Availability of recommended goods or services is established 2.4. Recommendations or selection of services or goods are made to customer
3. Determine and agree parameters for contract	3.1. Workplace contract format is used, adapting sections as required 3.2. Specification of services or goods to be provided is detailed within contract 3.3. Legal requirements are included within contract details 3.4. Draft contract provision is explained to customers and required amendments agreed 3.5. Formal agreement with terms of the contract by the customer is achieved

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to contracting, including the relevant legal, technical, regulatory, fiscal, cultural, environmental and safety requirements
- communicate ideas and information in a clear and unambiguous fashion and ensure that all communications satisfy the intent and legal requirements associated with contracting
- plan and organise activities, including the preparation, completion, execution and finalisation of the contract within the specified timeframe and to avoid any backtracking, workflow interruptions or wastage
- work with others in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete calculations required to establish and implement the contract
- create and apply systematic problem solving techniques to anticipate contracting problems, avoid supply difficulties
- use the workplace technology related to contracting, including calculators, computing/computer-aided systems and relevant contracting software

Required knowledge

- enterprise operating procedures and requirements
- organisation resources, capacities and capabilities
- contract management, preparation, submission and review processes
- contract evaluation processes
- financial and legal requirements for contracting
- relevant legislation relating to contracting and contracting for goods and/or services of the organisation

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, interpret and apply relevant information to the contract negotiations and provisions
- Apply safety requirements throughout the work sequence, including the use of personal protective clothing and equipment
- Establish and implement at least two significant contracts covering the following actions/activities:
 - establish the specification of the goods/service
 - identify and access probable suppliers
 - negotiate contracts considering:
 - legal and financial considerations requirements for the contract
 - requirements of workplace policy and procedures
 - discuss contract provisions and provide necessary explanations
 - check contract provisions as required by enterprise procedures
 - finalise contracts and file appropriate documentation
 - identify the impact of contract outcomes in terms of commercial risks
- Suggest improvements to purchasing operations and where appropriate, negotiate changes
- Work effectively with others

Resource implications

Customer request, goods/services, workplace contract documentation.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

EVIDENCE GUIDE	
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant commercial contracting practices and systems, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit covers the work involved in contracting the sale of goods or services to customers
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements • Work requires individuals to demonstrate administrative and organisational ability, discretion, judgement and problem solving skills
Workplace environment	<ul style="list-style-type: none"> • The function is undertaken in accordance with established enterprise procedures and practices may include requirements recommended by potential contractors • Work is generally performed within a team or group environment • Customers or suppliers may be internal or external
Information and procedures	<ul style="list-style-type: none"> • Work procedures/instructions • Specification of the required goods or services • Supply system directories, indices, catalogues • Contract law • Legislation/regulation/national and industry codes and practices relevant to the goods/services • Quality and Australian standards and procedures

Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFFT6001B Research and evaluate products, materials and processes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to effectively research and evaluate national and international developments and trends in furniture and furnishing products, materials and processes.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Research global market trends	1.1. Global market trends are researched and/or forecast in relation to products and processes 1.2. Developments in technology are investigated to ensure all possibilities are considered
2. Research production materials	2.1. Issues which may impact on the availability of current production materials are analysed and likely changes are forecast 2.2. Availability of new and/or alternative materials is researched and projections of potential benefits is completed
3. Identify manufacturing capabilities or implications	3.1. Manufacturing capabilities are defined in consultation with relevant personnel on issues such as human resources, materials, financial restraints, equipment capabilities, timelines and efficiency 3.2. Options or requirements for utilisation of external resources to undertake part of the work is determined when defining production capabilities
4. Evaluate and recommend product and materials options	4.1. Relevant information related to products, materials and processes is identified and compiled into usable data form 4.2. The impact of national and international trends on products and materials is analysed and preferred courses or options are identified 4.3. Other parameters are clarified, in consultation with production development, sales/marketing team, management and/or client, where required 4.4. Reports and/or presentations are prepared in accordance with enterprise procedures for input into business planning

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research, collect, organise and understand information related to national and international developments and trends in products, materials and processes
- communicate ideas and information to enable clarification of the requirements, coordination of work, the presentation/reporting of outcomes, findings and recommendations
- plan and organise activities, including the preparation and implementation of the formation collection strategy and plan, and actions to avoid any back tracking, interruptions or unproductive effort
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise information availability and workflow
- use mathematical ideas and techniques to correctly compile comparative data required for the description, analysis and evaluation of options
- create and apply systematic problem solving techniques to anticipate problems, avoid re-working and avoid inaccurate or inconclusive data
- use the workplace and commercial technology related to research, modelling and evaluation and to the storage and retrieval of information

Required knowledge

- relevant OHS legislation, regulatory requirements and copyright obligations and codes of practice
- sources of information on the appropriate furnishing sector, global and local trends
- existing research networks
- product specifications, materials and processes (existing and already forecast)
- business planning processes and techniques
- safety and environmental aspects of relevant enterprise activities

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Apply workplace health and safety policies in work operations
- Communicate effectively with customers, support agencies and colleagues
- Individually or as part of a management team, research and evaluate a significant product, its materials and processes, and:
 - research/forecast trends
 - define manufacturing capabilities/implications
 - identify the options in terms of the product and materials and the feasibility of production processes
 - evaluate options and provide balanced support for recommendations
 - provide formal recommendations for preferred business options

Resource implications

Access to real or appropriately simulated product, materials and process research and evaluation situations. This includes real or simulated work areas, materials, equipment, and information on work specifications and production processes, relevant safety procedures and regulations, quality standards, enterprise procedures and customer requirements.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and/or samples of work and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a simulated workplace facility with relevant equipment, simulated work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • Work involves activities associated with researching and evaluating new or alternate products, materials and related processes as a contribution to business planning • Significant research and analytical capabilities and judgement is required for this strategic function
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, authorised handling procedures and organisation insurance requirements
Workplace environment	<ul style="list-style-type: none"> • The competency can refer to enterprise and/or client initiated concepts, ideas or needs • Activities may relate to all the sector criteria normally required to evaluate products, materials and processes • The competency is applied without guidance in line with a broad plan, budget or existing strategy
Information and procedures	<ul style="list-style-type: none"> • Current and proposed product specifications • Design briefs • Marketing strategies • Organisation work procedures • Customer requirements • Legislation, regulations, and codes of practice • National and international sector publications related to products and materials innovations and change • National and international materials/resource forecast documents

RANGE STATEMENT

	<ul style="list-style-type: none"> • National and international trade fairs, expositions and symposiums • Quality and Australian standards and procedures
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Unit Sector(s)

Unit sector	Furnishing Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG1001B Complete a basic glass and glazing project

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to prepare, fabricate and assemble a basic glass and glazing project.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements including design variations, tolerances, process, materials, finish and quantity 1.2. Work sequence is planned 1.3. Procedures are determined for checking quality at each stage of the process 1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.5. Suitable work area is selected for the task 1.6. Preparatory drawings/set outs for tasks are confirmed 1.7. Materials are selected following work instructions 1.8. Tools and equipment suitable for the work are identified and checked for safe and effective operation
2. Fabricate and assemble components	2.1. Material is set out according to work instructions, prepared, and components are marked according to workplace procedures 2.2. Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications 2.3. Components are fabricated including any specified shapes, angles or curves and checked against set out and job requirements 2.4. Components are fitted to job requirements 2.5. Assembly process is undertaken according to workplace procedures 2.6. Item is checked for compliance with specifications 2.7. Item is finished in accordance with work instructions
3. Finalise operation and maintain equipment	3.1. Work area is cleaned, hand and/or power tools and equipment is cleaned, maintained and stored in accordance with workplace procedures 3.2. Off-cuts and unused materials are collected and stored for re-use or disposed following workplace procedures 3.3. Waste and scrap materials are dealt with following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination with work supervisor, other workers and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate working problems, avoid re-working and wastage
- use the limited workplace technology related to this glass and glazing project including tools, equipment, materials and measuring devices

Required knowledge

- the interpretation of plan representation of product design
- the preparation of drawings/set outs
- workflow in relation to glass and glazing projects
- identification of glass and glazing hand and basic processing tools, materials, equipment, processes and procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work instructions and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - achieve required production output and product quality
- Adapt or vary glass and glazing designs
- Prepare, fabricate and assemble at least one basic glass and glazing project which:
 - is of thin glass (annealed glass of less than or 6 mm thick or laminated glass of less than or 6.38 mm thick)
 - requires the use of glass and glazing hand tools and basic glass and glazing processing machines
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Access to plans/designs, glass and glazing hand tools and/or basic processing machines, equipment, materials, a work area and a specified project.

Method of assessment

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be conducted in conjunction with assessment of other relevant units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- Workplace health and safety requirements include OHS legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work involves reading and interpreting plans, developing set-outs, using hand and power tools, operating basic machinery, applying quality requirements and applying product finishing techniques and materials
- Work is conducted under supervision and guidance

Basic glass and glazing unit may include but is not limited to:

- fish tank
- display case
- flower vase/box
- ornamental box/case

Project is to be determined in consultation with supervisor/teacher

Tools and equipment may include, but are not limited to:

- flat felt covered cutting tables
- tungsten wheel glass cutters
- speed cutters
- circle cutters
- L-squares and straight edges
- tape measures
- glass handling gloves
- safety glasses
- gauntlets
- aprons
- marking pens

RANGE STATEMENT	
	<ul style="list-style-type: none"> • chinagraph pencils • templates and lubricants
Tables appropriate for cutting large glass sheets include:	<ul style="list-style-type: none"> • air flotation tables • roller castor tables or tilt tables with air flotation • breaker bars or roller castors
Edging equipment includes but is not limited to:	<ul style="list-style-type: none"> • finishing or belt machines • diamond or pencil edgers • pumice or cork polishers • horizontal wheels • finger slotters and hand tools
Drilling equipment may include, but is not limited to:	<ul style="list-style-type: none"> • portable • wall-mounted and free-standing diamond drill presses and saws
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • annealed glass (less than or 6mm thick) and laminated glass (less than or 6.38mm thick) as deemed appropriate for the project
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • gloves • safety glasses • gauntlets • footwear • earmuffs • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the handling of glass • Workplace procedures relating to the setting and operation of glass cutting, drilling and edging machines • Workplace procedures relating to the use of other tools and equipment • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures • Safety standards include personal protective equipment, OHS regulations and enterprise

RANGE STATEMENT	
	requirements <ul style="list-style-type: none"> AS4667 Quality requirements for cut to size and processed glass

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG2001B Use glass and glazing sector hand and power tools

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers work involving the use of hand and power tools in applications relating to the glass and glazing sector of the furnishing industry.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hand and power tools	1.1.Types of hand and power tools and their functions identified 1.2.Sources of, and access to power supply recognised 1.3.OHS requirements for using hand and power tools recognised and implemented
2. Select hand tools	2.1.Hand tools selected consistent with needs of job 2.2.Hand tools are checked for serviceability and safety and any faults reported to supervisor in accordance with enterprise procedures 2.3.Equipment selected to hold, position or support material for power tools application where applicable
3. Use hand tools	3.1.Material located and held in position for hand tool application 3.2.Hand tools safely and effectively used according to their intended use 3.3.Hand tools safely located when not in immediate use
4. Select power tools	4.1.Appropriate personal protective equipment selected, correctly fitted and used 4.2.Power tools selected consistent with needs of job in accordance with conventional work practice 4.3.Power tools visually checked for serviceability/safety in accordance with OHS requirements and any faults reported to supervisor in accordance with enterprise procedures 4.4.Equipment selected to hold, position or support materials for power tool application where applicable
5. Use power tools	5.1.Material located and held in position for power tool application where applicable 5.2.Power tools safely and effectively used in application processes 5.3.Power tools safely switched and located when not in use
6. Clean up work area and tools	6.1.All tools cleaned, maintained and stored 6.2.Equipment cleaned, maintained and stored 6.3.Documentation completed in accordance with enterprise procedures 6.4.Work area cleared and waste removed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- correctly and safely select, use and maintain hand and power tools
- meet quality standards of finish
- communicate effectively with supervisors and other workers
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity

Required knowledge

- workflow within the workplace
- workplace safety requirements and OH&S legislation
- function and purpose of hand and power tools used in the workplace

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Demonstrate compliance with OHS regulations applicable to workplace operations
- Adopt and carry out correct procedures prior to, during and after use of hand and power tools
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - identify each of the glass and glazing sector hand and power tools
 - indicate their applications and limitations
 - effectively and safely use them in the workplace environment
 - maintain and safely store them
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Indicate compliance with organisational policies and procedures including quality assurance requirements

Resource implications

Glass and glazing sector hand and power tools, materials used in the manufacturing and/or processing of glass and glazing products, operating procedures, work area and workplace requirements

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other relevant units of competency.

EVIDENCE GUIDE	
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- This unit covers work involving the use of hand and power tools in applications relating to the glass and glazing sector of the furnishing industry
- Work requires individuals to demonstrate skill, accuracy and dexterity in the application of tools to work tasks
- Work is carried out in accordance with statutory requirements, OHS legislation, environmental legislation, manual handling procedures, relevant health regulations and organisation insurance requirements
- OHS requirements may include: safe working practices, use of tools and equipment, use of power tools, safe handling and storage of materials in accordance with enterprise procedures

Hand tools used in the glass and glazing sector may include:

- tungsten wheel glass cutters
- speed cutters
- circle cutters
- radius and oval cutters
- vacuum straight edges
- lever and vacuum lifters
- plate and running pliers
- pop rivet pliers and general hand tools

Power tools used in the glass and glazing sector may include:

- Portable electric drills, screwdrivers, grinders, circular saws and jigsaws, plunge routers and sanders
- Drop, radius, mitre and upcut saws, bench drills and grinders
- Portable pneumatic drills, screwdrivers, grinders, nail and staple guns, pop rivet guns and compressors

Personal protective equipment

Personal protective equipment is to include that

RANGE STATEMENT	
	<p>prescribed under legislation, regulation and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • gauntlets • gloves • safety glasses • ear protection • hard hats • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Hand and power tool manufacturer specifications and operational procedures • Workplace procedures relating to OHS, tool handling and operation, reporting and communication • Work instructions, including job sheets, plans, drawings and designs

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG2002B Apply First Aid

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to identify the need for and the application of First Aid until the arrival of medically qualified personnel or the evacuation of the patient.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify the need for First Aid	1.1. Initial assessment is made of extent and nature of First Aid required from personal observation and/or witness reports 1.2. Initial assessment is reported to personnel/emergency services in accordance with workplace procedures
2. Ensure the safety of patient and carer	2.1. Hygiene is maintained for protection of patient and carer 2.2. Hazards to the patient and carer are identified and appropriate action is taken to prevent further injury to either party 2.3. Patient is made as comfortable as possible and reassured by word, manner and actions
3. Assess patient and apply First Aid	3.1. Patient is assessed against the DRABC (danger, response, airway, breathing, ventilation and circulation) model 3.2. Vital signs are measured, recorded and any changes noted and reported as appropriate 3.3. Treatment appropriate to the patient's injuries is provided in accordance with recognised First Aid techniques 3.4. First Aid equipment is operated/applied in accordance with recognised procedures and standards 3.5. Patient's condition is monitored and reported as required by workplace procedures, with treatment being modified as appropriate 3.6. Treatment is maintained until qualified medical assistants assume responsibility or until the patient is evacuated 3.7. Provide additional assistance as requested by medical/emergency services personnel 3.8. Details of First Aid administered are reported in accordance with workplace procedures
4. Complete work	4.1. First Aid equipment is recovered (if practical), cleaned, inspected/tested, refurbished, replaced and stored as appropriate 4.2. Medical waste is disposed of in accordance with workplace requirements 4.3. Equipment faults are rectified and reported in accordance with workplace procedures

ELEMENT	PERFORMANCE CRITERIA
	4.4. Documentation is completed as required by legislative, regulatory and workplace requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and analyse information related to workplace health and safety systems and procedures and the application of these to work situations
- communicate ideas and information on workplace safety issues, including the treating and recording/reporting of workplace incidents/accidents/illnesses and interpersonal communication with casualties
- plan and organise activities, including the inspection of first aid support facilities and treatment areas to ensure their completeness, adequacy, equipment and serviceability
- work with others and in a team to promote an awareness of first aid within the workplace and its provision when required
- use mathematical ideas and techniques to correctly complete measurements and calculations associated with assessment, treatment and monitoring of patient's condition
- use problem solving skills to assess and determine treatments and priorities in providing first aid to a patient
- use the workplace technology related to the reporting, recording and responding to workplace injuries and illnesses

Required knowledge

- workplace procedures and requirements for the treatment of workplace injuries/illnesses
- reporting responsibilities and requirements
- the provision of first aid including:
 - systems of the body (respiratory, skeletal, digestive, circulatory, nervous, urinary, skin)
 - causes and management of unconsciousness
 - priorities for life support (DRABC model)
 - resuscitation techniques
 - bleeding control and laceration treatment
 - patient assessment
 - principles of initial patient management
 - management and treatment of fractures and soft tissue injuries
 - management and treatment of burns

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Accurately follow workplace procedures for reporting injuries/illnesses and providing First Aid in the workplace • Identify and respond to injuries/illnesses occurring in the workplace • Apply emergency response First Aid • Provide appropriate treatment to and monitor patient's condition • Accurately report and document injuries and illnesses and treatment provided
<p>Resource implications</p>	<p>First Aid kit, stretchers and medical/First Aid facility Enterprise health and safety policies and procedures Personal protective equipment Patients</p>
<p>Method of assessment</p>	<p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be conducted in conjunction with assessment of other relevant units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant equipment, work instructions, casualties and urgency.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • The provision of First Aid and workplace responsibilities is to conform to OHS legislation, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, relevant health regulations and organisation insurance requirements • Work involves assessing situations, identifying appropriate control measures, awareness of emergency services responsibilities and responsiveness, treating injuries and maintaining equipment • Work may be conducted without supervision and guidance
First Aid	<ul style="list-style-type: none"> • First Aid is that assistance given to a patient who has suffered an injury or illness in the workplace. It is that assistance which is deemed necessary to attempt to resuscitate, stabilise and/or treat the patient until qualified medical personnel assume responsibility or until the patient is evacuated for appropriate medical treatment. • First Aid may include: <ul style="list-style-type: none"> • cardio-pulmonary resuscitation (CPR) • bleeding control • spinal injury care • basic patient management
Resources implications may include:	<ul style="list-style-type: none"> • First Aid kit • personal protective equipment • stretcher (may be improvised)
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and

RANGE STATEMENT	
	enterprise policies and practices.
Information and procedures may include:	<ul style="list-style-type: none"> • OHS legislation, regulations, codes of practice, environmental legislation, Australian Standards and codes of practice relating to hazards in the workplace, including: <ul style="list-style-type: none"> • obligations under relevant safety and health legislation and common law • local medical and emergency services • provisions relating to roles and responsibilities of health and safety representatives and/or OHS committees • risk management policies and procedures • First Aid procedures <ul style="list-style-type: none"> • safe manual handling and lifting procedures • emergency, fire and accident procedures • materials safety procedures • personal safety procedures • procedures for the use of personal protective equipment • job procedures and work instructions
Emergency services may include:	<ul style="list-style-type: none"> • support provided by ambulance, police, fire or SES personnel and equipment
Personnel may include:	<ul style="list-style-type: none"> • supervisors • managers • team leaders • First Aid attendants/other medically trained staff • specified OHS personnel • other persons authorised or nominated by the enterprise or industry to perform, approve, inspect and direct specified work

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG2003B Operate glass freefall rack and table

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the competency to use freefall racks and tables.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1. Work requirements in the form of type and quantity of glass to be moved are identified from work instructions</p> <p>1.2. Workplace health and safety requirements for operation of a freefall rack and table, including personal protection needs, are observed throughout the work</p> <p>1.3. The process for moving glass through the freefall rack and table is identified</p>
2. Prepare for work	<p>2.1. Work sequence is planned in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Planned route for relocating glass is checked for hazards and the work area is cleared of obstructions</p> <p>2.4. The area is cleared of unauthorised personnel prior to and during freefall operations in accordance with workplace procedures</p> <p>2.5. Freefall rack and table is checked for correct operation, is levelled and cleared of any foreign material</p>
3. Freefall glass	<p>3.1. If used, air supply is checked for operation</p> <p>3.2. Freefall equipment is operated in accordance with workplace procedures to move glass safely</p> <p>3.3. Problems occurring during operation are identified and reported to appropriate persons in accordance with workplace procedures</p> <p>3.4. Authorised changes in working procedures and/or requirements are followed</p>
4. Complete work	<p>4.1. Waste and scrap material is removed for disposal or recycling as required</p> <p>4.2. Work area is cleaned and rubbish disposed of as appropriate</p> <p>4.3. Workplace documentation is completed as required</p> <p>4.4. Tools, equipment and unused materials are removed and stored appropriately</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for economical cutting
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the limited workplace technology related to the operation of freefalling rack and table

Required knowledge

- the qualities and characteristics of glass, including the hazards and handling requirements
- the principles and techniques of freefalling glass from a rack to a table
- workplace safety system requirements related to the freefalling of glass
- workflow in relation to freefalling of glass using rack and table

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Plan the freefalling of glass using the rack and table operation
- Interpret work order/job instruction and locate and apply relevant information to relocate glass using a rack and table
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - demonstrate pre-free fall glass inspections and safety procedures
 - move, position and operate air and tilt drop benches
 - freefall factory run sizes (FRS) glass up to and including 10 mm thick
 - freefall 6.38 mm (or greater) laminated glass
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Glass freefall rack and table, workplace operating procedures, glass sheets, personal protective equipment and an appropriate work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

EVIDENCE GUIDE	
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant freefall rack and table equipment, glass sheet, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the planning, setting up and freefalling of glass from a rack to a table • Work may be performed in workplaces which are involved in the manufacture, processing and/or installation of sheet glass • Work is generally performed individually, with general supervision and may be part of a production process
Glass	Glass may be annealed or laminated
Tools and equipment are to include:	<ul style="list-style-type: none"> • storage rack • drop bench • glass handling equipment and hand tools
Equipment may include:	<ul style="list-style-type: none"> • air flotation and tilt benches with pneumatic breaker bars
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • annealed and laminated glass
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • gauntlets • gloves • safety glasses

RANGE STATEMENT	
	<ul style="list-style-type: none"> • hard hats • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of freefalling equipment • Workplace procedures relating to the handling and movement of glass • Workplace instructions, including job sheets, plans, cutting lists, drawings and designs • Safety standards include personal protective equipment, OHS regulations and enterprise requirements • Manufacturer instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG2004B Process thin glass by hand

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to cut, shape, drill and edgework annealed glass up to and including 6mm thick and laminated glass up to and including 6.38mm thick.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1. Work requirements including materials, types of cuts, shapes and edges, processes and quantities required are identified from work instructions or job order in accordance with workplace procedures</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.3. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.4. Cutting list and quality standards are determined and procedures identified in accordance with workplace requirements and industry standards</p> <p>1.5. Glass to be cut, shaped and drilled is selected using information from the work order including, type of glass, thickness, colour and dimensions</p> <p>1.6. Machines, equipment and settings required to perform the work are identified</p>
2. Prepare for work	<p>2.1. Sequence of work is planned to ensure processing is conducted in a logical order</p> <p>2.2. Suitable cutting, shaping, drilling, edging and lubrication methods are selected</p> <p>2.3. Glass processing table is selected and work surface is cleared of debris and dust</p> <p>2.4. Work area is cleared of obstructions and potential hazards with cullet bins located close to work area</p> <p>2.5. Glass is checked for imperfections and damage prior to handling</p> <p>2.6. Glass to be processed is located in the work area using correct manual handling procedures</p> <p>2.7. Glass is measured accurately to minimise waste and within specified tolerances according to enterprise standards</p> <p>2.8. Components and controls of machines including emergency stops and guards are identified and tested for working order</p>
3. Process glass	<p>3.1. Tools and equipment are operated and monitored in accordance with manufacturers' instructions and workplace procedures to ensure correct product quality and output</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. Glass is processed to required standard in accordance with job order, work instructions and procedures, including the performance of routine lubrication and adjustments of machines/equipment</p> <p>3.3. Problems occurring during work operations are identified and reported to appropriate persons</p> <p>3.4. Authorised changes in working procedures are followed</p> <p>3.5. Completed product is inspected for quality of work and repaired, reprocessed or discarded in accordance with workplace procedures</p>
4. Complete	<p>4.1. Processed glass is labelled and stored following workplace procedures ensuring there are no projections</p> <p>4.2. Scraps and off-cuts are removed for disposal or recycling as required</p> <p>4.3. Work area is cleaned and rubbish disposed of as appropriate</p> <p>4.4. Workplace documentation is completed as required</p> <p>4.5. Tools, equipment and unused materials are removed and stored appropriately</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, estimate glass requirements and minimise waste
- use pre-checking and inspection techniques to anticipate processing problems, avoid re-working and wastage
- use the limited workplace technology related to the processing

Required knowledge

- the qualities and characteristics of glass, including the hazards and handling requirements
- identification of glass processing equipment, functions and procedures
- the set up and operation of glass processing equipment including procedures for reporting product defects or equipment faults
- workplace safety system requirements related to glass processing
- workflow in relation to glass processing

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work orders and plan processing operations
- Identify the materials, patterns/plans, processes, machines, equipment and settings to undertake a glass processing task
- Apply AS4667 Quality requirements for cut to size and processed glass
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Set up for and prepare to process glass
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - identify and use AS4677 Quality requirements for cut-to-size and processed glass
 - complete straight cuts by hand and portable diamond saws, simple shapes, truncated and radius corners, circles, fan holes, pay holes and ovals in annealed and laminated glass up to and including 6.38 mm and up to 1.0 m²
 - rough and smooth arris annealed and laminated glass up to and including 6.38 mm by hand and up to 0.5 m²
 - drill holes with portable diamond drills and tungsten spear point drills in annealed and laminated glass up to and including 6.38 mm and up to 0.5 m²
 - calculate the cost of glass and edgework
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Glass sheet/product, processing facilities/equipment (such as cutting equipment and glass edging equipment),

EVIDENCE GUIDE	
	table, work area, work orders and appropriate safety and personal protection equipment.
Method of assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant glass processing equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements may include legislation, Australian Standard and building codes, material safety management systems, hazardous substances and dangerous goods codes and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the planning, preparation and processing of thin glass sheet
<p>Thin glass is:</p>	<ul style="list-style-type: none"> • annealed sheet glass less than or equal to 6mm thick. It may include mirrors. • laminated glass less than or equal to 6.38mm thick
<p>Glass processing by hand includes:</p>	<ul style="list-style-type: none"> • cutting • shaping • cutting by portable diamond saws • drilling and edging. <p>Edging may include arising</p>
<p>Tools and equipment are to include:</p>	<ul style="list-style-type: none"> • flat felt covered cutting tables • tungsten wheel glass cutters • speed cutters • circle cutters • portable diamond saws • L-squares and straight edges • tape measures • glass handling gloves • safety glasses • gauntlets

RANGE STATEMENT	
	<ul style="list-style-type: none"> • aprons • marking pens • chinagraph pencils • templates and lubricants
Tools and equipment may include:	<ul style="list-style-type: none"> • tables appropriate for cutting large glass sheets include mobile air floatation tables • roller castor tables or tilt tables with air floatation and breaker bars
Edging tools include but are not limited to:	<ul style="list-style-type: none"> • edging stones and hand arising blocks
Drilling equipment may include, but is not limited to:	<ul style="list-style-type: none"> • portable diamond drills and tungsten spear point hand drills
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • annealed and laminated glass for residential and commercial glazing • furniture applications and mirrors
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and Australian Standard policies and practices. It may include:</p> <ul style="list-style-type: none"> • gloves • safety glasses • gauntlets • footwear • earmuffs • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment required for the handling and processing of glass • Workplace instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials • AS4667 Quality requirements for cut to size and processed glass

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG2005B Move glass sheets by hand

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the competency to move sheets of flat glass by hand, as an individual and as a member of a team.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for task	<p>1.1. Work requirements in the form of type and quantity of glass to be relocated are identified from work instructions</p> <p>1.2. Workplace health and safety requirements for movement of glass sheets by hand, including personal protection needs, are observed throughout the work</p> <p>1.3. Glass sheets to be moved are identified and weight, shape, points of balance and dimensions are estimated or calculated</p> <p>1.4. Manual handling procedures for lifting, lowering and carrying, pushing and pulling are identified</p> <p>1.5. Risks to self, others, material and equipment are identified arising from the required lifting, load carrying, set down or movement of the glass</p> <p>1.6. Need for glass lifting equipment or team lifting determined</p> <p>1.7. Team lifting processes are considered for application including:</p> <ul style="list-style-type: none"> 1.7.1. nomination of team leader 1.7.2. calculation of capacity of team 1.7.3. techniques to be used 1.7.4. tasks of team members <p>1.8. Glass is checked for imperfections and damage prior to movement</p>
2. Plan glass movement	<p>2.1. Locations for glass storage are identified and routes to be followed determined</p> <p>2.2. Required clearances are compared to available space and adjustments made</p> <p>2.3. Process for relocating glass is planned including predicting and planning for potential difficulties</p> <p>2.4. Proposed process is checked against advisory standards and workplace procedures for compliance</p>
3. Relocate glass	<p>3.1. Actions of lifting, lowering and carrying, pulling and pushing are carried out in accordance with approved advisory standards and workplace procedures</p> <p>3.2. Team lifting tasks (if used) are coordinated according to approved advisory standards</p> <p>3.3. Planned process and route are followed</p> <p>3.4. Glass is relocated without damage to material,</p>

ELEMENT	PERFORMANCE CRITERIA
	personnel or equipment 3.5. Glass is labelled and stored following workplace procedures ensuring there are no projections 3.6. Relocation is checked to see that it meets work requirements, with any differences reported
4. Complete work	4.1. Work area is cleaned and rubbish disposed of as appropriate 4.2. Workplace documentation is completed as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and unnecessary effort and plan routes, including the avoidance/overcoming of obstacles/hazards
- use the limited workplace technology related to the relocation of glass sheets by hand

Required knowledge

- the qualities and characteristics of glass, including the hazards and handling requirements and the behaviour of glass sheets when lifted and moved
- workflow in relation to the movement of glass by hand
- the principles, requirements and techniques of moving glass sheets by hand
- workplace safety system requirements related to the moving of glass sheets by hand

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and locate and apply relevant information to plan the relocation of glass by hand
- Apply safe handling requirements for moving glass by hand, including use of personal protective equipment
- Plan the movement of the glass sheets
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - demonstrate safety and inspection procedures prior to lifting
 - safely lift and relocate annealed and laminated glass up to and including 1.2 m² (17 kg)
 - safely team lift and relocate annealed and laminated glass up to and including 4.5 m² (68 kg)
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Glass sheet to be relocated, workplace operating procedures and personal protection equipment and an appropriate work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

EVIDENCE GUIDE	
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with glass sheets, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • This unit covers work involving the movement of glass sheets by hand • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the planning and conduct of the operation. This may include team lifting • Work is generally performed individually, with general supervision and may be part of a production process • Work may be performed in workplaces which are involved in the manufacture, processing and/or installation of sheet glass • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
<p>Sheet glass may include, but is not limited to:</p>	<ul style="list-style-type: none"> • glass for residential and commercial windows and doors • tinted and heat reflecting • mirrors and furniture applications <p>Glass may be annealed or laminated</p>
<p>Tools and equipment are to include:</p>	<ul style="list-style-type: none"> • glass handling equipment and hand tools
<p>Tools and equipment may include:</p>	<ul style="list-style-type: none"> • lever and pump vacuum lifters • slings and trolleys
<p>Materials are to include but are not limited to:</p>	<ul style="list-style-type: none"> • annealed and laminated glass
<p>Personal protective equipment</p>	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • gauntlets

RANGE STATEMENT	
	<ul style="list-style-type: none"> • gloves • safety glasses • hard hats • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the handing and movement of glass • Work instructions, including job sheets and plans • Safety standards including personal protective equipment, OHS regulations and enterprise requirements

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFGG2006B Move single glass sheets by mechanical means

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the competency to move single sheets of flat glass by mechanical means.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for task	<p>1.1. Work requirements in the form of type and quantity of glass to be relocated are identified from work instructions</p> <p>1.2. Workplace health and safety requirements for movement of glass sheets by mechanical means, including personal protection needs, are observed throughout the work</p> <p>1.3. Glass sheets to be moved are identified and weight is estimated or calculated</p> <p>1.4. Appropriate mechanical handling equipment is identified</p> <p>1.5. Risks to self, others, material and equipment are identified arising from the required lifting, load carrying, set down or movement of the glass</p> <p>1.6. Equipment and controls including emergency stops and guards are identified and checked for safe operation</p> <p>1.7. Damaged or worn parts are reported to appropriate personnel</p> <p>1.8. Glass is checked for imperfections and damage prior to movement</p>
2. Plan glass movement	<p>2.1. Locations for glass storage are identified and routes to be followed determined</p> <p>2.2. Required clearances are compared to available space and adjustments made</p> <p>2.3. Process for relocating glass is planned including predicting and planning for potential difficulties</p> <p>2.4. Proposed process is checked against advisory standards and workplace procedures for compliance</p>
3. Relocate glass	<p>3.1. Equipment is operated in accordance with approved advisory standards, manufacturers' instructions, workplace procedures and OH&S requirements</p> <p>3.2. Planned process and route are followed</p> <p>3.3. Glass is relocated without damage to material, personnel or equipment</p> <p>3.4. Glass is labelled and stored following workplace procedures ensuring there are no projections</p> <p>3.5. Relocation is checked to see that it meets work requirements, with any differences reported</p>
4. Complete work	4.1. Waste and scrap material is removed for disposal or

ELEMENT	PERFORMANCE CRITERIA
	recycling as required 4.2. Work area is cleaned and rubbish disposed of as appropriate 4.3. Workplace documentation is completed as required 4.4. Handling equipment is cleaned, maintained and stored according to workplace procedures

Required Skills and Knowledge

Required knowledge
<ul style="list-style-type: none"> • the qualities and characteristics of glass, including the hazards and handling requirements and the behaviour of glass sheets when lifted and moved • workflow in relation to the movement of glass by mechanical means • the principles, requirements and techniques of moving glass sheets by mechanical means • workplace safety system requirements related to the moving of glass sheets by mechanical means • capabilities, operating processes and procedures of mechanical handling equipment

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and locate and apply relevant information to plan the relocation of glass using mechanical means
- Select and use appropriate equipment and techniques to relocate glass sheets
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - identify personal protective safety apparel and safety regulations for overhead lifting
 - identify and safely use gantry cranes up to 4.9 safe working load (SWL), including relevant standards and regulations
 - identify and use scissor grabs and vacuum rigs for lifting single glass sheets
 - follow pre safety and inspection procedures
 - calculate the weight, safely load and secure glass
 - relocate single sheets of glass by vacuum and scissor grabs up to 4.5 m² (170 kg)
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Mechanical glass handling equipment, glass sheet to be relocated, workplace operating procedures and personal protection equipment and an appropriate work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and

EVIDENCE GUIDE	
	questioning on underpinning knowledge. Assessment may be in conjunction with assessment of other relevant units of competency.
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant mechanical equipment, glass sheets, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • This unit covers work involving the movement of glass sheets by mechanical means • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the planning and conduct of the operation. • Work is generally performed individually, with general supervision and may be part of a production process • Work may be performed in workplaces which are involved in the manufacture, processing and/or installation of sheet glass • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
Glass may include, but is not limited to:	<ul style="list-style-type: none"> • annealed • laminated • toughened • tinted • heat reflecting and mirrors
Mechanical handling equipment is to include but is not limited to:	<ul style="list-style-type: none"> • gantry cranes up to 4.9swl • scissor and vacuum grabs
Tools and equipment are to include:	<ul style="list-style-type: none"> • air and tilt tables • A-frames and stillage racks
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • annealed and laminated glass
Personal protective equipment	<p>Personal protective equipment is that prescribed under legislation, regulation and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • gauntlets

RANGE STATEMENT	
	<ul style="list-style-type: none"> • gloves • safety glasses • hard hats • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the handing and movement of glass • Work instructions, including job sheets and plans • Equipment manufacturer instructions • Safety standards including personal protective equipment, OHS regulations and enterprise requirements • Manufacturer instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFGG2007B Process glass by basic machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to cut, shape, drill and edge annealed glass up to and including 6mm thick and laminated glass up to and including 6.38mm thick.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1. Work requirements including materials, types of cuts, shapes and edges, processes and quantities required are identified from work instructions or job order in accordance with workplace procedures</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.3. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, of the appropriate quality, serviceable and in a safe condition</p> <p>1.4. Cutting list and quality standards are determined and procedures identified in accordance with workplace requirements and industry standards</p> <p>1.5. Glass to be cut, shaped, drilled or edged is selected using information from the work order, including type of glass, thickness, colour and dimensions</p> <p>1.6. Machines, equipment and settings required to perform the work are identified</p>
2. Prepare for work	<p>2.1. Technique and sequence of work is planned to ensure processing is conducted in a logical order</p> <p>2.2. Procedures for monitoring quality of materials, work in progress and finished items are identified in accordance with workplace requirements and industry practice</p> <p>2.3. Suitable cutting, shaping, drilling, and edging machines are selected</p> <p>2.4. Glass processing table is selected and work surface is cleared of debris and dust</p> <p>2.5. Components and controls of machines including emergency stops and guards are identified and tested for working order</p> <p>2.6. Work area is cleared of obstructions and potential hazards</p> <p>2.7. Glass to be processed is located in the work area using appropriate handling techniques</p> <p>2.8. Glass is measured accurately to minimise waste and within specified tolerances according to enterprise standards</p> <p>2.9. Components and controls of machines including emergency stops and guards are identified and tested</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>for working order</p> <p>2.10. Glass is checked for imperfections and damage prior to handling</p>
3. Conduct processing operations	<p>3.1. Tools and equipment are operated and monitored in accordance with manufacturers' instructions and workplace procedures to ensure correct product quality and output</p> <p>3.2. Glass is processed to required standard in accordance with job order, work instructions and procedures, including the performance of routine lubrication and adjustments of machines/equipment</p> <p>3.3. Problems occurring during work operations are identified and reported to appropriate persons in accordance with enterprise procedures</p> <p>3.4. Waste quantities are checked to ensure that they are within allowable limits</p> <p>3.5. Authorised changes in working procedures are followed</p> <p>3.6. Completed product is inspected for quality of work and repaired, reprocessed or discarded in accordance with workplace procedures</p>
4. Complete work	<p>4.1. Processed glass is labelled and stored following workplace procedures ensuring there are no projections</p> <p>4.2. Scraps and off-cuts are removed for disposal or recycling as required</p> <p>4.3. Work area clean up is completed following workplace procedures</p> <p>4.4. Equipment is cleaned and stored according to workplace requirements</p> <p>4.5. Workplace documentation is completed in accordance with workplace requirements</p> <p>4.6. Tools, equipment and unused materials are removed and stored appropriately</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and weight, estimate glass requirements and minimise waste
- use pre-checking and inspection techniques to anticipate processing problems, avoid re-working and wastage
- use the limited workplace technology related to the processing of glass by basic machine, including handling aids, tools, equipment, calculators and measuring devices

Required knowledge

- the qualities and characteristics of glass, including the hazards and handling requirements
- workplace safety system requirements related to glass processing by basic machines
- identification of glass processing equipment, including its functions and procedures
- the set up and operation of glass processing equipment including procedures for reporting machine/product defects or equipment faults
- workflow in relation to glass processing

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work orders and plan processing operations
- Identify the materials, patterns/plans, processes, machines, equipment and settings to undertake a glass cutting, drilling, shaping and/or edging task by basic machines
- Apply safe handling requirements for machines, equipment, products and materials, including use of personal protective equipment
- Apply AS4667 Quality requirements for cut to size and processed glass
- Set up for and prepare to process glass
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - identify and use AS4667 Quality requirements for cut-to-size and processed glass
 - complete straight cuts, simple shapes, truncated and radius corners, circles, fan holes, pay holes and ovals in glass up to 6 mm annealed and 6.38 mm laminated glass up to 1.0 m²
 - cut 6 mm annealed and 6.38 mm laminated glass using a diamond saw
 - arris, grind and polish flat, round and mitre edges on 6 mm annealed and 6.38 mm laminated glass up to 0.5 m²
 - drill holes with tungsten and diamond drill bits in 6 mm annealed and 6.38 mm laminated glass up to 0.5 m²
 - calculate the cost of glass and edgework
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

EVIDENCE GUIDE	
Resource implications	Glass sheet/product, processing facilities/equipment (such as basic cutting and edging machines), table, work area, work orders and appropriate safety and personal protection equipment.
Method of assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant glass processing machines, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • This unit covers work involving cutting, shaping, drilling and/or edging of glass by basic machines • Work requires individuals to demonstrate discretion, judgement and problem solving skills in determining the appropriate techniques, methods and equipment to be used to process glass by basic machines. This may be demonstrated either individually or in a team environment • OHS requirements may include legislation, building codes, material safety management systems, hazardous substance and dangerous goods codes and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
Glass is:	<ul style="list-style-type: none"> • annealed glass less than or equal to 6mm thick • laminated glass less than or equal to 6.38mm thick
Glass processing includes:	<ul style="list-style-type: none"> • straight cutting • circle cutting • freehand cutting • drilling and edging
Edging may include:	<ul style="list-style-type: none"> • arrising • flat • round and mitre grinding • flat • round and mitre polishing and bevelling
Tools and equipment may include:	<ul style="list-style-type: none"> • flat felt covered cutting tables • tungsten wheel glass cutters

RANGE STATEMENT	
	<ul style="list-style-type: none"> • speed cutters • circle cutters • L-squares and straight edges • tape measures • glass handling gloves • safety glasses • gauntlets • aprons • marking pens • chinagraph pencils • templates and lubricants
Tables appropriate for cutting large glass sheets include:	<ul style="list-style-type: none"> • air flotation tables • roller castor tables or tilt tables with air flotation • breaker bars or roller castors
Edging equipment may include but is not limited to:	<ul style="list-style-type: none"> • finishing or belt machines • diamond or pencil edgers • pumice or cork polishers • horizontal wheels • finger slotters and hand tools
Drilling equipment may include, but is not limited to:	<ul style="list-style-type: none"> • portable • wall-mounted and free-standing diamond drill presses and saws
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • annealed and laminated glass for residential and commercial glazing and furniture applications
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and Australian Standard policies and practices. It may include:</p> <ul style="list-style-type: none"> • gloves • safety glasses • gauntlets • footwear • earmuffs • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of glass cutting, drilling and

RANGE STATEMENT

	edging machines <ul style="list-style-type: none"> • Work instructions, including job sheets, cutting lists and plans • Safety standards include personal protective equipment, OHS regulations and enterprise requirements • AS4667 Quality requirements for cut to size and processed glass
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Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG2008B Glaze/reglaze residential windows and doors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to fit glass to residential windows and doors.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1. Work requirements in the form of type of glass and the method of fixing are identified from work instructions</p> <p>1.2. Workplace health and safety requirements for glazing/reglazing of windows and doors, including personal protection needs, are observed throughout the work</p> <p>1.3. The process for fitting glass to window and door frames is identified</p>
2. Prepare for work	<p>2.1. Work sequence is planned in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials (less glass and frames) are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Type of glass to be fitted and frames are selected to match:</p> <ul style="list-style-type: none"> 2.3.1. customer order 2.3.2. existing glass type 2.3.3. requirements for security, noise or light control 2.3.4. Australian Standards <p>2.4. Glass is checked for type, size and imperfections</p> <p>2.5. Glass fixing method is selected according to:</p> <ul style="list-style-type: none"> 2.5.1. specification 2.5.2. type of glass and frame 2.5.3. security requirements 2.5.4. sealing methods 2.5.5. Australian Standards <p>2.6. Frame condition is assessed to ensure suitability for glazing in accordance with customer order and Australian Standards. Defective frames are reported for repair or replacement in accordance with workplace procedures</p> <p>2.7. Fixing and sealing materials are prepared by mixing or cutting to length as appropriate</p>
3. Identify site conditions and restraints	<p>3.1. On-site difficulties are recognised and action taken to resolve in accordance with regulations and workplace requirements</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. Covering material is applied where necessary to protect existing fixtures and fittings</p> <p>3.3. Special characteristics of the window or door which may affect the finished job are identified and corrective action taken</p>
4. Perform glazing	<p>4.1. Frame is prepared to receive glass by:</p> <ul style="list-style-type: none"> 4.1.1. checking size against specification 4.1.2. removing remains of glass and any sealants 4.1.3. cleaning 4.1.4. surface preparation (if required) <p>4.2. Glass is fixed to the frame using the selected method and in accordance with recognised industry procedures and Australian Standards</p> <p>4.3. Solvents and sealants are used in accordance with manufacturer recommendations and Australian Standards</p> <p>4.4. Excess sealing material is removed</p> <p>4.5. Glass and frame are cleaned after fixing</p>
5. Complete work	<p>5.1. Completed installation is checked to ensure compliance with customer requirements and specifications</p> <p>5.2. Tools, equipment and materials are cleaned and stored following workplace procedures</p> <p>5.3. Work area is cleaned and left in a safe condition and rubbish disposed of as appropriate</p> <p>5.4. Waste and scrap materials are removed for disposal or recycling as required</p> <p>5.5. Workplace documentation is completed in accordance with workplace requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the limited workplace technology related to the glazing of simple window and door frames

Required knowledge

- the qualities and characteristics of glass, including the hazards and handling requirements
- the techniques, methods, materials and process of glazing simple/complex window and door frames
- workplace safety system requirements related to the glazing simple/complex window and door frames
- relevant Australian Standards
- workflow in relation to fitting glass
- characteristics, purpose and operation of tools and equipment used in glazing simple/complex window and door frames
- identification of equipment, processes and procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and locate and apply relevant information to glaze/reglaze simple/complex windows and doors
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Glaze the following:
 - timber putty faced and beaded window sashes, including fixed, sliding, double hung, casement and awning sashes
 - metal channel and beaded window sashes, including fixed, sliding, double hung, casement and awning sashes
 - timber putty faced and beaded doors, including fixed, sliding, hinged, pivot and bi-fold doors
 - metal channel and beaded doors, including fixed, sliding, hinged, pivot and bi-fold doors
- Include the following for each:
 - select glass thickness and type in accordance with AS1288
 - calculate glazing clearance and cutting size
 - cut glass to AS4667 Quality requirements for cut to size and processed glass
 - select glazing tools, equipment, glazing sealants, vinyls and tapes
 - prepare working area
 - prepare glazing rebates and channels prior to installation
 - clean glass, tools, equipment and work area
 - calculate the cost of glass, glazing materials and

EVIDENCE GUIDE	
	<p>labour</p> <ul style="list-style-type: none"> • Re-glaze timber and metal windows and doors, including: <ul style="list-style-type: none"> • prepare work area and drop sheets • select reglazing tools and equipment • hack out/remove beads and glass safely from timber windows and doors • remove and disassemble metal window sashes and doors and remove glass safely • select glass thickness and type in accordance with AS1288 • calculate glazing clearance and cutting size • cut glass to industry standards AS4667 • select glazing tools, equipment, glazing sealants, vinyls and tapes • glaze timber and metal windows and doors • install sash cords, unique and spring balances on timber and metal double hung windows • clean glass, tools, equipment and work area • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
Resource implications	Frames, glass, fixing material, sealants, workplace operating procedures and work orders, personal protective equipment and an appropriate work area/site.
Method of assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant glazing equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the handling and installation of glass products
- Work may be performed in workplaces which are involved in on-site and off-site fabrication, installation and/or replacement of glass to commercial or residential windows, doors and other openings or to other frames

Glaze/re-glaze

- Involves the installation of glass to metal and/or timber doors, windows and other frames and reglazing of existing windows and doors
- Residential glazing/re-glazing is confined to simple doors and windows and may include:
 - residential windows, such as fixed, sliding, casement, awning and double hung and louveres
 - residential doors, such as sliding, hinged, pivot and bi-fold
- Glazing or reglazing for non-residential situations is addressed in commercial and architectural/engineering AQF III units

Types of glass may include but are not limited to:

- annealed glass
- toughened glass
- laminated glass
- wired glass

RANGE STATEMENT	
	<ul style="list-style-type: none"> • tinted and heat reflective glass • coated glass and insulated glass units.
Tools and equipment are to include:	<ul style="list-style-type: none"> • tungsten wheel glass cutters • speed cutters • cutting lubricants • running pliers • straight edges and squares • tape measures • glass handling and lifting equipment • hack-out knives • chisels • putty knives • sprig/diamond guns • vinyl cutters and rollers • pry bars • sealant guns • blade and phillips head screwdrivers • pop rivet guns • electric and pneumatic drills • rubber mallets • claw hammers • nail punches and PPE equipment
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • all forms of flat glass and acrylic glazing products • plastic • aluminium • steel • solid timber • gaskets • sealants • adhesives • glazing tapes and setting blocks
Methods of glazing may include:	<ul style="list-style-type: none"> • channel glazing • beaded glazing and double glazing
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and Australian Standard policies and practices. It may include:</p> <ul style="list-style-type: none"> • gloves

RANGE STATEMENT	
	<ul style="list-style-type: none"> • safety glasses • gauntlets • safety footwear • hard hats • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the glazing of simple windows and doorframes • Australian Standards AS1288, 2208, 4667, 2047, 4666 • Equipment and material manufacturers' specifications and operational procedures • On-site procedures and regulations relating to the handling and movement of glass • Work instructions, including job sheets, plans, drawings and designs • Safety standards include personal protective equipment, OHS regulations and enterprise requirements

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFGG2009B Fabricate and assemble metal frames

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to fabricate and assemble metal frames.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements and components	<p>1.1. Work requirements in the form of product to be fabricated, its use, specifications, components and attachments are identified from work instructions</p> <p>1.2. Australian Standards relating to glass components and products associated with the process are identified</p> <p>1.3. Workplace health and safety requirements for fabrication and assembly of metal frames, including personal protection needs, are observed throughout the work</p> <p>1.4. Components attachments, materials and tools required for the fabrication and assembly are identified and their availability, suitability (in terms of size, quantity, finish and profile), quality and serviceability ascertained</p> <p>1.5. Tools, equipment and fixing and joining devices suitable for the method of fixing are identified</p> <p>1.6. The process for the fabrication and assembly of metal frames is identified</p>
2. Prepare for fabrication and assembly	<p>2.1. Work sequence is planned in a logical order to suit the product specifications</p> <p>2.2. Tools, equipment, components, attachments and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Jigs identified as being required are prepared or selected and checked for suitability for purpose</p> <p>2.4. Measurements are checked for accuracy, legibility and tolerance</p> <p>2.5. Mating or directional marks are noted and positioned</p> <p>2.6. Machines and equipment are set up in accordance with production objectives, manufacturers' instructions and workplace procedures</p>
3. Fabricate and assemble components	<p>3.1. Machines, tools and equipment are operated in accordance with manufacturer instructions and workplace procedures to produce components in conformance to specifications</p> <p>3.2. Components are laid out and assembled using:</p> <p>3.2.1. jig (if required)</p> <p>3.2.2. appropriate fastenings</p>

ELEMENT	PERFORMANCE CRITERIA
	3.2.3. appropriate tools and equipment 3.3. Frames are assembled ensuring conformity to specifications, alignment and appropriate fastening
4. Complete work	4.1. Completed frame is inspected to ensure compliance with quality standards and customer requirements 4.2. Completed frame is inspected to ensure compliance with quality standards and customer requirements 4.3. Equipment is cleaned, inspected and stored in accordance with workplace procedures, with unserviceable items tagged, faults identified and appropriate personnel are informed 4.4. Work area is cleaned and rubbish disposed of as appropriate 4.5. Workplace documentation is completed in accordance with enterprise requirements 4.6. Waste materials are removed from work area and disposed of in accordance with relevant statutory requirements and enterprise requirements 4.7. Tools, equipment and unused materials are removed and stored appropriately

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise component and material sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the limited workplace technology related to the fabrication and assembly of metal frames

Required knowledge

- workflow in relation to frame production
- workplace safety system requirements related to the fabrication and assembly of metal frames
- operation of tools and equipment used in the fabrication and assembly process
- identification of equipment, processes and procedures
- relevant Australian Standards

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and locate and apply relevant information to fabricate and assemble metal frames
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete work from product specification data sheets
- Identify and select product materials
- Fabricate frame and sash components, including:
 - cutting
 - tooling
 - routing
 - milling
 - drilling
 - crimping
- Identify, select and install component hardware, including:
 - weather seals
 - wheels
 - stays
 - hinges
 - guides
 - locks
- Assemble frames, including:
 - glass
 - gaskets
 - tapes
 - sealants

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • adhesives • fasteners • Reveal linings and flashings in accordance with AS2047, Section 6 • Label and certify frames in accordance with AS2047, Section 8 • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
Resource implications	Frame components, consumables, workplace operating procedures, personal protective equipment, an appropriate work area, tools and equipment.
Method of assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of machines and in the assembly of frames
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures
- Work may be performed in workplaces which are involved in the manufacture of frames from aluminium and/or steel

Fabrication and assembly

This includes the selection of materials, components and attachments required for a metal frame, its fabrication and assembly prior to its installation.

Fabrication may include but is not limited to:

- cutting
- routing
- milling
- pressing
- drilling
- crimping

Tools and equipment may include:

- assembly benches
- drop and up-cut saws
- pneumatic
- hydraulic and manual presses
- frame and sash tooling
- copy routers

RANGE STATEMENT	
	<ul style="list-style-type: none"> • end millers • crimpers • electric and pneumatic powered drills and screwdrivers • pop rivet guns • pleuws guns and general hand tools
Materials may include but are not limited to:	<ul style="list-style-type: none"> • aluminium alloys and steel • hardware • fasteners • plastics • sealants • tapes • vinyl • gaskets and timber reveals <p>Glass includes annealed glass, safety glass, patterned glass, tinted, heat reflective and insulated glass units.</p>
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and Australian Standard policies and practices. It may include:</p> <ul style="list-style-type: none"> • gloves • safety glasses • gauntlets • safety footwear • hard hats • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the setting and operation of machinery • Machine manufacturer specifications and operational procedures • Work instructions, including job sheets, cutting lists plans, drawings and designs • Safety standards, including personal protective equipment, OHS regulations and enterprise requirements • AS2047 Windows in Buildings

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG2010B Fabricate and install insect and security screens

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to measure, fabricate and install insect screens, security doors and window grills.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for work	<p>1.1. Work requirements in the form of type of insect or security screen to be fabricated and installed are identified from work instructions. This includes the identification of its pattern or plan</p> <p>1.2. Workplace health and safety requirements for fabrication and installation of insect or security screens, including personal protection needs, are observed throughout the work</p> <p>1.3. The process for fabricating and installing insect or security screens is identified</p> <p>1.4. Quantities of materials required are calculated from plans or work instructions or by measuring the screen opening in accordance with Australian Standards and industry practice</p> <p>1.5. Cutting lists are prepared from plans, work instructions or measurements of opening to suit the type of screen to be installed</p> <p>1.6. Fittings, fixings and joining devices or materials are selected in line with specifications or type of materials to be joined or fixed</p> <p>1.7. Tools and equipment appropriate to the work method are identified</p>
2. Prepare for work	<p>2.1. Work sequence is determined in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Components of the insect or security screen are checked against specifications or job order for: size, quantity, finish and profile</p>
3. Fabricate and install insect or security screen	<p>3.1. Materials are measured and marked to cutting list requirements and most economical use of materials</p> <p>3.2. Materials are cut and stamped to cutting list requirements in accordance with workplace procedures or industry practice</p> <p>3.3. Components of insect or security screen are assembled in accordance with recognised industry standards</p> <p>3.4. Fittings are installed to screen in accordance with workplace procedures or industry practice</p>

ELEMENT	PERFORMANCE CRITERIA
	3.5. Insect or security screen is installed in opening in accordance with recognised industry standards
4. Complete work	4.1. Installed insect or security screen is inspected for quality of work and repaired, refabricated or reinstalled as required in accordance with workplace procedures 4.2. Material which can be reused is collected and stored 4.3. Waste and scrap materials are removed for disposal or recycling as required 4.4. Work area is cleaned and rubbish disposed of as appropriate 4.5. Tools, equipment and unused materials are cleaned and removed and stored appropriately 4.6. Workplace documentation is completed in accordance with workplace requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the limited workplace technology related to the fabrication and installation of insect and security screens

Required knowledge

- workflow in relation to the fabrication and installation of insect and security screens
- characteristics of materials used and uses of products produced
- workplace safety system requirements related to fabricating and installing insect and security screens
- identification of equipment, processes and procedures
- relevant Australian Standards

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Plan the fabrication and installation of insect and security screens
- Interpret work order/job instruction and locate and apply relevant information to fabricate and install insect and security screens
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - measure for insect and security windows and doors
 - identify and select product materials used within the industry/workplace
 - fabricate frame and components, including optimisation of materials, cutting, tooling, drilling and crimping to ensure compliance to Australian Standards
 - identify, select and install component hardware including wheels, hinges, guides, locks and closures
 - assemble frames including mesh and grills to comply with Australian Standard requirements
 - apply fixing techniques and procedures relating to the correct installation of insect and security screens, doors and window grills
 - apply current Australian Standards and type testing procedures
 - calculate cost of insect and security screens and doors
- Work effectively with others
- Modify activities to cater for variations in workplace

EVIDENCE GUIDE	
	contexts and environment.
Resource implications	Aluminium framing material, aluminium security grill material, aluminium sheeting, insect screen mesh, fittings, fixing/fasteners, workplace operating procedures, personal protective equipment and an appropriate work area.
Method of assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant fabrication and installation equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the fabrication and installation process
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations, Australian standards and organisation insurance requirements
- OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures
- Work is generally performed individually, with general supervision and may be part of a production process

Insect and security screens may include:

- fixed
- sliding and emergency exit grills to suit various commercial and domestic window types
- sliding and hinged door applications

Tools and equipment are to include:

- assembly benches
- drop and up-cut saws
- pneumatic and manual presses
- stamping and notching tools
- copy routers
- end millers
- crimpers
- electric and pneumatic powered drills and screwdrivers
- pop rivet guns
- fly screen spline rollers
- soft rubber mallets
- knives
- bolt cutters or mechanical shears

RANGE STATEMENT	
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • extruded door framing • corner stakes • interlocks • fly mesh • security mesh • fittings and fixing/fasteners and anti jemmy protection hardware
Fittings include:	<ul style="list-style-type: none"> • hinges • wheels • lock mechanisms that comply with Australian standards • door closures and lock guards
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and Australian Standard policies and practices. It may include:</p> <ul style="list-style-type: none"> • gauntlets • gloves • safety glasses • safety footwear • hard hats • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the fabrication and installation of insect screens and security doors and windows • Equipment or tool manufacturers' specifications and operational procedures • Work instructions, including job sheets, plans, drawings and designs • Safety standards include personal protective equipment, OHS regulations and enterprise requirements • Australian Standards

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3001B Store and handle glass

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to handle, relocate and store glass in the workplace.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify storage requirements	<p>1.1. Work requirements in the form of type and quantity of glass to be stored are identified from work instructions</p> <p>1.2. Workplace health and safety requirements for storage and handling of glass, including personal protection needs, are observed throughout the work</p> <p>1.3. Glass to be stored is checked against paperwork and any discrepancies are reported according to workplace procedures</p> <p>1.4. Storage requirements are identified from manufacturer instructions, statutory regulations and workplace procedures</p> <p>1.5. Locations for glass storage are identified and checked for availability and suitability</p> <p>1.6. The process and procedures for moving, handling and storing are identified</p> <p>1.7. Team lifting processes are considered for application including:</p> <p>1.7.1. nomination of team leader</p> <p>1.7.2. calculation of capacity of team</p>
2. Prepare for glass movement	<p>2.1. Work sequence is planned in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Planned route for relocating glass is determined and checked for hazards and the work area is cleared of obstructions</p> <p>2.4. Risks to self and others are identified and acted upon according to statutory requirements and workplace procedures</p> <p>2.5. Required clearances are compared to available space and adjustments made</p> <p>2.6. Process for relocating glass is planned including predicting and planning for potential difficulties</p> <p>2.7. Proposed process is checked against code of practice and workplace procedures for compliance</p>
3. Relocate glass	<p>3.1. Safety checks are carried out on required handling equipment, and any damaged or worn parts are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>reported according to workplace practices</p> <p>3.2. Handling equipment is operated safely and correctly in accordance with manufacturers' instructions and workplace procedures</p> <p>3.3. Planned process and route are followed</p> <p>3.4. Glass is relocated without damage to material, personnel or equipment</p> <p>3.5. Glass is labelled and stored following workplace procedures ensuring there are no projections</p> <p>3.6. Relocation is checked to see that it meets work requirements, with any differences reported</p>
4. Complete job requirements	<p>4.1. Handling equipment is cleaned, maintained and stored according to workplace procedures</p> <p>4.2. Work area is cleaned and rubbish disposed of as appropriate</p> <p>4.3. Workplace documentation is completed as required according to workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the limited workplace technology related to the operation of handling, relocating and storing glass

Required knowledge

- the qualities and characteristics of glass, including the hazards and handling requirements
- workflow in relation to the movement and storage of glass
- glass storage requirements
- identification of equipment, processes and procedures
- workplace safety system requirements related to the handling, relocation and storage of glass

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Plan the handling, relocation and storing of glass
- Interpret work order/job instruction and locate and apply relevant information to relocate and store glass
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - identify, select and use personal safety apparel
 - identify equipment for the handling and storage of glass
 - calculate the weight of glass
 - handle annealed and laminated glass up to and including 1.2 m² (17 kg)
 - team handle annealed and laminated glass up to and including 4.5 m² (68 kg)
 - relocate single sheets of glass by vacuum and scissor grabs up to 4.5 m² (170 kg)
 - safely load and secure glass
 - relocate blocks and end caps of glass sheets by grabs, slings and chains up to 2t
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Glass to be stored, workplace operating procedures, personal protective equipment, an appropriate work area and others to assist as required.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

EVIDENCE GUIDE	
	<p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	<p>Assessment may occur on the job or in a workplace simulated facility with relevant glass handling equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the planning and conduct of the operation. This may be demonstrated either individually or in a team environment
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures
- Work is generally performed individually, with general supervision and may be part of a production process

Storing and handling glass

The storage and handling of glass is a necessary function of all workplaces working in the manufacture, processing and/or installation of sheet glass or glass products. It involves the handling, moving and storing of glass in quantities appropriate to the workplace requirement and may involve team lifting as well as the application of individual skills.

Glass

Glass may be annealed, laminated, toughened, patterned, tinted and heat reflecting. It includes:

- domestic and commercial glass
- mirrors
- shower screens
- furniture glass
- safety glass
- patterned or specialty glass

Tools and equipment are to

- hand trolleys

RANGE STATEMENT	
include:	<ul style="list-style-type: none"> • pallet truck • gantry crane • scissor • sling and jumbo grabs • air and tilt tables • vacuum lifters
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • annealed and laminated glass
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies. It may include:</p> <ul style="list-style-type: none"> • gloves • safety glasses • hard hats • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the handling and movement of glass • Work instructions, delivery dockets, job sheets and plans • Workplace procedures relating to reporting and communication • Safety standards include personal protective equipment, OHS regulations and enterprise requirements • Quality standards include AS4667 Quality requirements for cut to size and processed glass • Manufacturer instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3002B Assess glass and glazing requirements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to assess and identify glass and glazing requirements for buildings to comply with Australian Standard 1288.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirement	<p>1.1. Customer requirements and expectations regarding glass and glazing work or technical advice are identified and confirmed through a process of liaison and consultation</p> <p>1.2. Workplace health and safety requirements for process for assessing glass and glazing requirements, including personal protection needs, scaffolding and lifting equipment, are observed throughout the work</p> <p>1.3. Requirements are recorded and confirmed according to workplace requirements</p> <p>1.4. The process for assessing glass and glazing requirements is identified</p>
2. Prepare for work	<p>2.1. Work sequence is planned in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Research materials are accessed and analysed for applicability</p> <p>2.4. Site visit is conducted if possible to confirm requirements and to identify any restrictions or unforeseen hazards/considerations</p> <p>2.5. Product sources are contacted to ascertain current state of art/developments if appropriate</p>
3. Conduct assessment	<p>3.1. Influencing factors are identified and their significance and impact on the end product determined</p> <p>3.2. Specifications for the requirement are documented in accordance with workplace procedures</p> <p>3.3. Products/types of glass are identified and their application determined</p> <p>3.4. Technical or other professional advice is sought if applicable and available in accordance with workplace procedures</p> <p>3.5. Possible solutions may be modelled or trialled in accordance with workplace procedures</p> <p>3.6. Optimal solution is identified and specifications confirmed</p>
4. Complete work	4.1. Solution is converted into work instructions/job

ELEMENT	PERFORMANCE CRITERIA
	orders in accordance with workplace procedures 4.2. Other documentation, including any advice/referral to customer, is completed in accordance with workplace practices 4.3. Work area is cleaned and rubbish disposed of as appropriate

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to glass and glazing, work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of information and reference materials to facilitate assessment, avoid workflow interruptions and assist efficacy of solutions
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for application and assemble required resources
- apply knowledge, analytical skills and tools to assist in the assessment of glass and glazing requirements to plan work, providing effective and acceptable solutions
- use the workplace technology related to the assessment of glass and glazing requirements

Required knowledge

- workplace operating procedures and AS1288
- the qualities and characteristics of glass, including types, qualities, applications and limitations
- products and processes and current trends and developments in glass and glazing techniques/applications
- workflow and operating requirements of work systems in own work area
- workplace safety system requirements related to the handling and installation of glass

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret glass and glazing requirement and accurately determine solutions to meet work situations/customer queries
- Identify and confirm requirements/customer expectations
- Locate, interpret and apply information for situation to be assessed
- As a minimum, demonstrate the ability to:
 - apply the requirements of AS1288 (requires an understanding of scope, definitions, abbreviations and symbols)
 - determine thickness limits for standard nominal thickness of glass
 - identify and calculate aspect ratios
 - identify regional boundaries, terrain categories and their description
 - determine minimum nominal glass thicknesses for various glazing situations using wind loading design charts and tables
 - identify types of safety glazing materials
 - determine the safety glazing materials for various glazing situations
 - determine safety glazing material thicknesses from flow charts
 - identify basic installation details for glazing
 - identify the design considerations and glazing techniques for toughened glass assemblies
- Work effectively with others
- Modify activities to cater for variations in workplace cultures and environment

Resource Implications

Work requirements, workplace operating procedures, personal protective equipment and an appropriate work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

EVIDENCE GUIDE	
	<p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of Assessment	<p>Assessment may occur on the job or in a simulated workplace facility with relevant glass and glazing requirements, simulated work instructions and commitments.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the planning, setting up and freefalling of glass from a rack to a table
- Work may be performed in workplaces which are involved in the manufacture, processing and/or installation of sheet glass
- Work is generally performed individually and may be on a one-to-one basis with a customer/supervisor, with only limited supervision and may be part of a production process

Glass and glazing assessment

- Glass and glazing assessment involves the assessment required for all glass and glazing tasks. It may be a formal and documented process or an informal on-the-job assessment of a situation/requirement.
- Factors which may influence the assessment include:
 - residential and commercial applications
 - building height/limitations
 - wind loading considerations
 - regional boundaries/zones
 - terrain description/categories
 - human impact considerations

RANGE STATEMENT	
Tools and equipment may include:	<ul style="list-style-type: none"> • tape measures • calculators • glass thickness and glazing material indicators • product data and samples • relevant standards/codes • stationery and calculator
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • gauntlets • gloves • safety glasses • hard hats • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Work procedures/instructions relating to assessment of glass and glazing requirements • Regulatory/legislative requirements, particularly those pertaining to building codes, OHS and environmental requirements • Manufacturer specifications and instructions, particularly those pertaining to new products/developments • Organisation work specifications and requirements • Authorised organisational or external personnel • Australian standards: AS1288, 2208, 1170.2, HB125 • Workplace experience/expertise and previous projects/work

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3003B Move block/bulk glass sheet by mechanical means

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to move block or bulk flat glass by mechanical means.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for task	<p>1.1. Work requirements in the form of type and quantity of glass to be relocated are identified from work instructions</p> <p>1.2. Workplace health and safety requirements for movement of block glass sheet by mechanical means, including personal protection needs, are observed throughout the work</p> <p>1.3. Blocks of glass sheet to be moved are identified and weight is estimated or calculated</p> <p>1.4. Appropriate mechanical handling equipment is identified</p> <p>1.5. Risks to self, others, material and equipment are identified arising from the required lifting, load carrying, set down or movement of the glass</p> <p>1.6. Equipment and controls including emergency stops and guards are identified and checked for safe operation</p> <p>1.7. Damaged or worn parts are reported to appropriate personnel</p> <p>1.8. Glass is checked for imperfections and damage prior to movement</p>
2. Plan glass movement	<p>2.1. Locations for glass storage are identified and routes to be followed determined</p> <p>2.2. Required clearances are compared to available space and adjustments made</p> <p>2.3. Process for relocating glass is planned including predicting and planning for potential difficulties</p> <p>2.4. Proposed process is checked against advisory standards and workplace procedures for compliance</p>
3. Relocate glass	<p>3.1. Equipment is operated in accordance with approved advisory standards, manufacturers' instructions, workplace procedures and OH&S requirements</p> <p>3.2. Planned process and route are followed</p> <p>3.3. Glass is relocated without damage to material and equipment or injury</p> <p>3.4. Glass is labelled and stored following workplace procedures ensuring there are no projections</p> <p>3.5. Relocation is checked to see that it meets work requirements, with any differences reported</p>
4. Complete work	<p>4.1. Waste and scrap material is removed for disposal or</p>

ELEMENT	PERFORMANCE CRITERIA
	recycling as required 4.2. Work area is cleaned and rubbish disposed of as appropriate 4.3. Workplace documentation is completed as required 4.4. Handling equipment is cleaned, maintained and stored according to workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and unnecessary effort and plan routes including the avoidance/overcoming of obstacles/hazards
- use the limited workplace technology related to the relocation of block glass sheet by mechanical means

Required knowledge

- the qualities and characteristics of glass, including the hazards and handling requirements and the behaviour of block glass sheet when lifted and moved
- workflow in relation to the movement of glass by mechanical means
- the principles, requirements and techniques of moving block glass sheet by mechanical means
- workplace safety system requirements related to the moving of block glass by mechanical means
- capabilities, operating processes and procedures of mechanical handling equipment

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work order/job instruction and locate and apply relevant information to plan the relocation of glass using mechanical means
- Select and use appropriate equipment and techniques to relocate block glass sheet
- Apply safe handling requirements for equipment, products and materials, include use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - identify personal protective safety apparel and safety regulations for overhead lifting
 - identify and safely use gantry cranes up to 4.9 swl, including standards and regulations
 - identify and use block grabs, slings and chains for lifting blocks or end caps of glass sheets
 - calculate the weight of glass
 - safely load and secure glass
 - relocate blocks and end caps of glass sheets by grabs, slings and chains up to 2 t
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Mechanical glass handling equipment, glass sheet to be relocated, workplace operating procedures and personal protection equipment and an appropriate work area.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and

EVIDENCE GUIDE	
	questioning on underpinning knowledge. Assessment may be in conjunction with assessment of other relevant units of competency.
Context of Assessment	Assessment may occur on the job or in a workplace simulated facility with relevant mechanical equipment, block glass sheet, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Unit context</p>	<ul style="list-style-type: none"> • This unit covers work involving the movement of block glass sheet by mechanical means • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the planning and conduct of the operation • Work is generally performed individually, with general supervision and may be part of a production process • Work may be performed in workplaces which are involved in the manufacture, processing and/or installation of sheet glass • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
<p>Block/bulk glass may be:</p>	<ul style="list-style-type: none"> • end caps • cased or factory run size (FRS) blocks <p>Glass may be annealed or laminated</p>
<p>Mechanical handling equipment is to include:</p>	<ul style="list-style-type: none"> • gantry cranes up to 4.9swl • block grabs • slings and chains
<p>Tools and equipment are to include:</p>	<ul style="list-style-type: none"> • glass handling equipment and general hand tools
<p>Materials are to include but are not limited to:</p>	<ul style="list-style-type: none"> • annealed and laminated glass
<p>Personal protective equipment overhead lifting. It may include:</p>	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices for overhead lifting. It may include:</p> <ul style="list-style-type: none"> • gauntlets

RANGE STATEMENT	
	<ul style="list-style-type: none"> • gloves • safety glasses • safety footwear • hard hats • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the handling and movement of glass • Work instructions, including job sheets and plans • Equipment manufacturer instructions • Safety standards including personal protective equipment, OHS regulations and enterprise requirements • Manufacturer instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFGG3004B Process thick glass by hand

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to cut, shape, drill and edge annealed glass, which is greater than 6mm thick and laminated glass, which is greater than 6.38mm thick.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1. Work requirements including materials, types of cuts, shapes and edges, processes and quantities required are identified from work instructions or job order in accordance with workplace procedures</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.3. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.4. Cutting list and quality standards are determined and procedures identified in accordance with workplace requirements and industry standards</p> <p>1.5. Glass to be cut, shaped, drilled or edged is selected using information from the work order including: type of glass, thickness, colour and dimensions</p> <p>1.6. Machines, equipment and settings required to perform the work are identified</p>
2. Prepare for work	<p>2.1. Sequence of work is planned to ensure processing is conducted in a logical order</p> <p>2.2. Suitable cutting, shaping, drilling, edging and lubrication methods are selected</p> <p>2.3. Glass processing table is selected and work surface is cleared of debris and dust</p> <p>2.4. Work area is cleared of obstructions and potential hazards with cullet bins located close to work area</p> <p>2.5. Glass is checked for imperfections and damage prior to handling</p> <p>2.6. Glass to be processed is located in the work area using correct manual handling procedures</p> <p>2.7. Glass is measured accurately to minimise waste and within specified tolerances according to enterprise standards</p> <p>2.8. Components and controls of machines including emergency stops and guards are identified and tested for working order</p>
3. Process glass	<p>3.1. Tools and equipment are operated and monitored in accordance with manufacturers' instructions and workplace procedures to ensure correct product quality and output</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2. Glass is processed to required standard in accordance with job order, work instructions and procedures, including the performance of routine lubrication and adjustments of machines/equipment</p> <p>3.3. Problems occurring during work operations are identified and reported to appropriate persons</p> <p>3.4. Authorised changes in working procedures are followed</p> <p>3.5. Completed product is inspected for quality of work and repaired, reprocessed or discarded in accordance with workplace procedures</p>
4. Complete work	<p>4.1. Processed glass is labelled and stored following workplace procedures ensuring there are no projections</p> <p>4.2. Scraps and off-cuts are removed for disposal or recycling as required</p> <p>4.3. Work area is cleaned and rubbish disposed of as appropriate</p> <p>4.4. Workplace documentation is completed as required</p> <p>4.5. Tools, equipment and unused materials are removed and stored appropriately</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, estimate glass requirements and minimise waste
- use pre-checking and inspection techniques to anticipate processing problems, avoid re-working and avoid wastage
- use the limited workplace technology related to the processing of glass including handling aids, tools, equipment, calculators and measuring devices

Required knowledge

- the qualities and characteristics of glass, including the hazards and handling requirements
- identification of glass processing equipment, functions and procedures
- the set up and operation of glass processing equipment including procedures for reporting product defects or equipment faults
- workplace safety system requirements related to glass processing
- workflow in relation to glass processing

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work orders and plan processing operations
- Identify the materials, patterns/plans, processes, machines, equipment and settings to undertake a glass processing task
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Set up for and prepare to process glass
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - identify and use AS4667 Quality requirements for cut to size and processed glass
 - complete straight cuts by hand and diamond saws, simple shapes, truncated and radius corners, circles and ovals in annealed and laminated glass greater than 6.38 mm and up to 1.0 m²
 - rough and smooth arris annealed and laminated glass greater than 6.38 mm by hand up to 0.5 m²
 - drill holes with portable diamond drills and tungsten spear point drills in annealed and laminated glass greater than 6.38 mm up to 0.5 m²
 - calculate the cost of glass and edgework
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Glass sheet/product, processing facilities/equipment (such as cutting equipment and glass edging equipment), table, work area, work orders and appropriate safety and personal protection equipment.

Method of assessment

Assessment methods must confirm consistency of

EVIDENCE GUIDE	
	<p>performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	<p>Assessment may occur on the job or in a workplace simulated facility with relevant glass processing equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous substance and dangerous goods codes and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the planning, preparation and processing of thin glass sheet
Thick glass is:	<ul style="list-style-type: none"> • annealed sheet glass greater than 6mm thick • laminated glass greater than 6.38mm thick
Glass processing by hand includes:	<ul style="list-style-type: none"> • its cutting • use of portable diamond saws • shaping • drilling and edging. Edging may include arising
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • flat felt covered cutting tables • tungsten wheel glass cutters • speed cutters • circle cutters • portable diamond saws • L-squares and straight edges • tape measures • glass handling gloves • safety glasses • gauntlets • aprons • marking pens • chinagraph pencils

RANGE STATEMENT	
	<ul style="list-style-type: none"> • templates and lubricants
Tables appropriate for cutting large glass sheets include:	<ul style="list-style-type: none"> • air flotation tables • roller castor table or tilt table with air flotation or roller castors
Edging tools includes but is not limited to:	<ul style="list-style-type: none"> • edging stones and hand arrisers
Drilling equipment may include, but is not limited to:	portable diamond drills and tungsten spear point hand drills
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • annealed and laminated glass for residential and commercial windows and doors • structural glass • mirrors • table tops and shower screens
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • gloves • safety glasses and footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment required for the handling and processing of glass • Workplace instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials • Quality standards and procedures

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3005B Process glass by semi-automatic and automatic machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to cut, drill, shape and edge glass by semi-automatic and automatic glass processing equipment.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1. Work requirements including materials, types of cuts, shapes and edges, processes and quantities required are identified from work instructions or job order in accordance with workplace procedures</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.3. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, of the appropriate quality, serviceable and in a safe condition</p> <p>1.4. Cutting list and quality standards are determined and procedures identified in accordance with workplace requirements and industry standards</p> <p>1.5. Glass to be cut, shaped, drilled or edged is selected using information from the work order including: type of glass, thickness, colour and dimensions</p> <p>1.6. Machines, equipment and settings required to perform the work are identified</p> <p>1.7. Information required to be entered into machine to match work requirements or job order is identified and calculated</p>
2. Prepare for work	<p>2.1. Technique and sequence of work is planned to ensure processing is conducted in a logical order</p> <p>2.2. Procedures for monitoring quality of materials, work in progress and finished items are identified in accordance with workplace requirements and industry practice</p> <p>2.3. Tools, equipment and attachments required for the work are assembled and checked for good working order</p> <p>2.4. Components and controls of machines including emergency stops and guards are identified and tested for working order</p> <p>2.5. Information required by machine for required process is entered</p> <p>2.6. Work area is cleared of obstructions and potential hazards</p> <p>2.7. Glass to be processed is located in the work area using appropriate handling techniques</p> <p>2.8. Glass to be processed is checked for imperfections</p>

ELEMENT	PERFORMANCE CRITERIA
	and damage
3. Conduct processing operations	<p>3.1. Tools and equipment are operated and monitored in accordance with manufacturers' instructions and workplace procedures to ensure correct product quality and output</p> <p>3.2. Glass is processed to required standard in accordance with job order, work instructions and procedures, including the performance of routine lubrication and adjustments of machines/equipment</p> <p>3.3. Problems occurring during work operations are identified and reported to appropriate persons in accordance with enterprise procedures</p> <p>3.4. Waste quantities are checked to ensure that they are within allowable limits</p> <p>3.5. Authorised changes in working procedures are followed</p> <p>3.6. Completed product is inspected for quality of work and repaired, reprocessed or discarded in accordance with workplace procedures</p>
4. Complete work	<p>4.1. Processed glass is labelled and stored following workplace procedures ensuring there are no projections</p> <p>4.2. Scraps and off-cuts are removed for disposal or recycling as required</p> <p>4.3. Work area clean up is completed following workplace procedures</p> <p>4.4. Equipment is cleaned and stored according to workplace requirements</p> <p>4.5. Workplace documentation is completed in accordance with workplace requirements</p> <p>4.6. Tools, equipment and unused materials are removed and stored appropriately</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and weight, estimate glass requirements and minimise waste
- use pre-checking and inspection techniques to anticipate processing problems, avoid re-working and wastage
- use the developing workplace technology related to the processing of glass by semi-automatic and automatic machines including computers, handling aids, tools and equipment

Required knowledge

- the qualities and characteristics of glass, including the hazards and handling requirements
- workplace safety system requirements related to glass processing by semi-automatic and automatic machines
- identification of semi-automatic and automatic glass processing machines, including their functions and procedures
- the set up and operation of semi-automatic and automatic glass processing machines including procedures for reporting machine/product defects or equipment faults
- workflow in relation to glass processing

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret work orders and plan processing operations
- Identify the materials, patterns/plans, processes, machines, equipment and settings to undertake a glass cutting, drilling, shaping and/or edging task with semi-automatic or automatic machines
- Apply safe handling requirements for machines, equipment, products and materials, including use of personal protective equipment
- Set up for and prepare to process glass
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - process and upload computerized cutting data from optimisation software programs
 - load and position stock sheets onto semi-automatic and automatic cutting tables
 - perform pre-cutting tool and machinery checks
 - cut given dimensions from stock sheets with minimal wastage/off-cuts
 - cut shapes from optimisation data
 - remove, pack and store cut glass including labelling for despatch
 - calculate the cost of glass and edgework
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Semi-automatic, automatic or computerised glass processing equipment, optimisation software programs, work area, standard operating procedures, work orders, unprocessed materials and appropriate safety and personal protection equipment.

EVIDENCE GUIDE	
Method of Assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of Assessment	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • This unit covers work involving cutting, shaping, drilling and/or edging of glass by semi-automatic and automatic machines • Work requires individuals to demonstrate discretion, judgement and problem solving skills in determining the appropriate techniques, methods and equipment to be used to process glass by basic machines. This may be demonstrated either individually or in a team environment • OHS requirements may include legislation, building codes, quality standards, material safety management systems, hazardous substance and dangerous goods codes and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
Glass	<p>Glass may be annealed or laminated. It may include but is not limited to:</p> <ul style="list-style-type: none"> • float glass and coated glass
Glass processing includes:	<ul style="list-style-type: none"> • cutting • shaping • drilling and edging
Cutting may include but is not limited to:	<ul style="list-style-type: none"> • straight line cutting • shape cutting • circle and oval cutting.
Edging may include:	<ul style="list-style-type: none"> • arrising • flat and mitre grinding • polishing and bevelling
Semi-automatic and automatic	<ul style="list-style-type: none"> • semi-automatic, automatic and computerised cutting shaping and edging machines.

RANGE STATEMENT	
machines include but are not limited to:	Machines may be manual or computer-navigated.
Information requirements of computerised machines, (CNC) may include but are not limited to:	<ul style="list-style-type: none"> • glass thickness • size • type • stock sheet size • off-cut sizes • print-out information or spreadsheets
Tools and equipment are to include:	<ul style="list-style-type: none"> • flat felt covered cutting tables • gloves • safety glasses • marking pens • chinagraph pencils • templates and lubricants
Tables appropriate for cutting large glass sheets include:	<ul style="list-style-type: none"> • air flotation tables • roller castor table or tilt table with air flotation or roller castors
Edging equipment includes but is not limited to:	<ul style="list-style-type: none"> • semi-automatic and computer-navigated straight line and variable angle edgers • straight line and shape edgers • bevellers and brilliant cutters
Glass cutting equipment includes but is not limited to:	<ul style="list-style-type: none"> • semi-automatic and computer-navigated straight line annealed and laminated glass cutters • shape cutters • laser glass cutters • diamond saws and water-jet cutters
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • annealed and laminated glass for residential and commercial windows and doors • architectural glazing • mirrors and furniture applications
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • gloves • gauntlets • safety glasses • footwear • aprons/overalls

RANGE STATEMENT	
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications, operational and maintenance procedures • Workplace procedures relating to the setting and operation of computerised glass cutting, shaping, drilling and edging machines • Work instructions, including job sheets, cutting lists and plans • Safety standards include personal protective equipment, OHS regulations and enterprise requirements • AS4667 Quality requirements for cut to size and process glass

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3006B Apply film to glass

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to prepare glass surfaces and cut and apply window film.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1. Work requirements in the form of type and quantity of glass and type and colour/nature of film are identified from work instructions</p> <p>1.2. Workplace health and safety requirements for application of film to glass, including personal protection needs, are observed throughout the work</p> <p>1.3. Equipment, accessories and materials are identified for the application of film in accordance with workplace procedures</p> <p>1.4. Materials Safety Data Sheets and/or product application and safety information are read and used to guide work practices</p> <p>1.5. Particular process techniques, time and safety requirements are noted and used to plan work</p> <p>1.6. The process for applying film to glass is identified</p>
2. Prepare for work	<p>2.1. Work sequence is planned in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Film to be applied is checked for defects or damage</p> <p>2.4. Surfaces are measured and materials and templates cut without causing damage according to accepted industry methods, materials and procedures</p> <p>2.5. Glass is cleaned/prepared using approved methods, materials and equipment following film and product manufacturer instructions and/or workplace practices</p> <p>2.6. Glass is checked for damage and suitable preparation</p> <p>2.7. Any faults/flaws are identified and reported in accordance with workplace procedures</p> <p>2.8. Appropriate workplace documentation is completed and handled as required by measuring, cutting and surface preparation outcomes</p>
3. Apply film	<p>3.1. Equipment and accessories are used to apply the film in accordance with manufacturers' and workplace instructions</p> <p>3.2. Surfaces are kept clean and free of contamination according to the specifications and procedures for materials/product used</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Problems occurring during operation are identified and reported to appropriate persons in accordance with workplace procedures</p> <p>3.4. Authorised changes in working procedures and/or requirements are followed</p> <p>3.5. the application of film outcomes</p>
4. Inspect tinted product and refurbish work area	<p>4.1. Windows are inspected and any film faults are rectified in accordance with workplace procedures</p> <p>4.2. Australian Standard sticker is applied if appropriate</p> <p>4.3. Tinted products are removed for storage/further processing as required by workplace procedures</p>
5. Complete work	<p>5.1. Waste and scrap material is removed for disposal or recycling as required</p> <p>5.2. Work area is cleaned and rubbish disposed of as appropriate</p> <p>5.3. Appropriate workplace documentation to reflect application and inspection is completed and handled as required by workplace procedures</p> <p>5.4. Tools, equipment and unused materials are removed and stored appropriately</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and markings, calculate work requirements, optimise film and glass sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the limited workplace technology related to the application of film to glass

Required knowledge

- the qualities and characteristics of glass, including the hazards and handling requirements
- workflow in relation to the application of film to glass
- workplace safety system requirements and relevant technical information for applying film to glass
- relevant Australian Standards
- measuring and cutting procedures
- surface preparation procedures including cleaning agents and relevant cleaning procedures
- relevant application methods including equipment, processes and procedures
- statutory legislation appropriate to the range of duties (including ADRs)

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and locate and apply relevant information to apply film to glass
- Identify film products and equipment required and plan work sequence
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - indicate ideal shapes for accurate pattern making
 - have a sound knowledge of glass types and the need for care in cutting both film and glass
 - demonstrate accuracy in cutting film from patterns and trimming film on glass
 - demonstrate a knowledge of cleaning all types of glass to ensure it is correctly prepared in accordance of film manufacturers' recommendations prior to film application
 - follow film manufacturers' guidelines for correct squeegee procedure for the application of various films (to be determined by films normally applied in the workplace)
 - demonstrate a knowledge of film manufacture to ensure correct handling, storage and application of all films
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Film, glass sheet/product for coating, work area, tools, personal protective equipment, cleaning and other consumables and work orders.

EVIDENCE GUIDE	
Method of assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency .</p>
Context of assessment	<p>Assessment may occur on the job or in a workplace simulated facility with relevant application equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of film application equipment. This may be demonstrated either individually or in a team environment
- Work may be performed in workplaces which are involved in the manufacture, processing and/or installation of glass and/or the application of film to glass for domestic, commercial or automotive application. These may be in enterprise facilities or at customer's premises/location
- Work is generally performed individually, with general supervision and may be part of a production process

Glass includes:

- automotive
- domestic and commercial glass
- mirrors
- shower screens and furniture glass
- Glass may be annealed, laminated or toughened

Window film may include but is not limited to:

- solar
- reflective
- tinted
- safety

RANGE STATEMENT	
	<ul style="list-style-type: none"> • security and decorative film
Tools and equipment are to include:	<ul style="list-style-type: none"> • squeegees and holsters • five-way cutting-in tools • edge bumping gold card tools • hard edge spear cards • screen wiping tools • trim knives • scrapers • scourers • measures • drop sheets • calculator • chamois • steamers • heat guns • flushing units • filter units • hand tools (pliers, files, screwdrivers and spanners)
Materials may include but are not limited to:	<ul style="list-style-type: none"> • window film • trim and scraper blades • slip solution • glass cleaner • adhesive remover and other consumables (towel, steel wool, etc)
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • gauntlets • gloves • safety glasses • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Film manufacturer specifications and instructions • Vehicle manufacturer specifications/insurance company instructions/statutory requirements (including ADRs) • Customer's requirements • Workplace procedures relating to the handling

RANGE STATEMENT

	<p>and movement of glass and the application of film</p> <ul style="list-style-type: none"> • Safety standards, including personal protective equipment, OHS regulations, enterprise requirements and special requirements specified by MSDS and instructions • Work instructions including job sheets, cutting lists, plans, drawings and designs • Quality and Australian Standards and procedures
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Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFGG3007B Form glass

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to form glass.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1. Work requirements are identified from work instructions to determine:</p> <ul style="list-style-type: none"> 1.1.1. materials to be used 1.1.2. pattern or mould to be used 1.1.3. process required to complete work tasks 1.1.4. number of sheets to be formed and holding area for completed items 1.1.5. the correct kiln settings for the glass being formed <p>1.2. Workplace health and safety requirements relevant to forming glass, including personal protection needs, are observed throughout the work</p> <p>1.3. The process for obtaining materials and moving completed work to the next process is identified</p> <p>1.4. Procedures are identified for checking:</p> <ul style="list-style-type: none"> 1.4.1. quality of materials and items produced 1.4.2. working condition of kiln and any other equipment/attachments 1.4.3. quality requirements for each stage of the forming process <p>1.5. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Prepare for work	<p>2.1. Work sequence is planned in a logical order to suit the job</p> <p>2.2. Kiln, tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Kiln components and controls, including emergency stops and guards are identified and checked for correct operation</p>
3. Conduct glass forming operations	<p>3.1. Kiln and forming equipment is operated, adjusted and monitored in accordance with workplace procedures to ensure correct product quality and output</p> <p>3.2. Problems occurring during work operations are identified and reported to appropriate persons in accordance with workplace procedures</p>

ELEMENT	PERFORMANCE CRITERIA
	3.3. Authorised changes in working procedures and/or requirements are followed
4. Complete work	4.1. Product is inspected for quality against work instructions, and items that do not meet requirements are reworked or discarded 4.2. Waste and scrap material is removed for disposal or recycling as required 4.3. Tools, equipment and unused materials are removed and/or stored as appropriate 4.4. Work area and kiln is cleaned and rubbish disposed of as appropriate 4.5. Workplace documentation is completed as required by workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, minimise wastage and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the limited workplace technology related to the forming of glass

Required knowledge

- the qualities and characteristics of glass, including the hazards and handling requirements
- identification of equipment, processes and procedures for forming glass
- procedures for reporting materials, product or equipment faults
- workplace safety system requirements related to the forming of glass
- workflow in relation to forming of glass
- characteristics of materials used and uses of products produced

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and prepare to form glass
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Complete a minimum of forming glass of four differing patterns using varying slumping techniques to the capacity of the kiln being used. Patterns may be existing moulds or improvised designs.
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Glass forming equipment, work area, work order, standard operating procedures, unprocessed materials.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- This unit covers work involving the operation and monitoring of glass forming in kilns
- OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment
- Work is generally performed individually, with general supervision and may be part of a production process
- Work may be performed in workplaces which are involved in the manufacture of customised formed glass products

Forming glass

- Forming glass is the texturing or patterning of glass by bringing float glass to a semi-molten state and forming or slumping it over a pattern. As kiln-formed glass is custom manufactured, patterns/artwork are specific to a project. Moulds and patterns are formed to produce textures and patterns for the industry (glass merchants, architects, designers, shop fitters, signwriters and bathroom supplies, commercial and domestic)
- Glass being formed may include but is not limited to:
 - sheet glass
 - float glass

RANGE STATEMENT	
	<ul style="list-style-type: none"> patterned glass
Tools and equipment are to include:	<ul style="list-style-type: none"> kiln bed (sand bed screed flat and firm to create the patterns or artwork) moulds and items for background patterns such as paint rollers wire trowels
Materials are to include but are not limited to:	<ul style="list-style-type: none"> float glass sand and patterning material such as silicone dowel sea shells
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> gauntlets gloves safety glasses hard hats safety footwear aprons and overalls
Information and procedures	<ul style="list-style-type: none"> Equipment manufacturer specifications and operational procedures Workplace procedures relating to the setting and operation of glass forming equipment Work instructions, including job sheets, plans, drawings and designs Safety standards include personal protective equipment, OHS regulations and enterprise requirements Quality standards and procedures

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3008B Apply patterns and designs to glass

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to apply patterns and/or designs to glass surfaces.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1. Work instructions are used to identify:</p> <ul style="list-style-type: none"> 1.1.1. material to be used for application of design or pattern 1.1.2. pattern or plan to be followed 1.1.3. process required to complete work tasks 1.1.4. items to which pattern or design is to be applied 1.1.5. holding area for completed items 1.1.6. the material curing time (if required) for the type of material used and type of glass <p>1.2. Workplace health and safety requirements for application of patterns and designs to glass surfaces, including personal protection needs, are observed throughout the work</p> <p>1.3. Tools and equipment suitable to the work method are identified</p> <p>1.4. The process for applying patterns and designs to glass surfaces is identified</p>
2. Prepare for work	<p>2.1. Work sequence is planned in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Pattern or design template (if required) is produced from plan or design or drafted from existing design or pattern</p> <p>2.4. Procedures are identified for checking:</p> <ul style="list-style-type: none"> 2.4.1. quality of materials and items produced 2.4.2. quality requirements for each stage of the application process
3. Apply pattern or design to glass surface	<p>3.1. Pattern or design template is applied or glass surface is masked as necessary with appropriate materials</p> <p>3.2. Pattern or design is applied to glass surface in accordance with workplace procedures or industry practice</p> <p>3.3. Problems occurring during operation are identified and reported to appropriate persons in accordance with workplace procedures</p> <p>3.4. Any authorised changes in working procedures are</p>

ELEMENT	PERFORMANCE CRITERIA
	followed
4. Complete work	4.1. Product is inspected for quality of work and repaired or discarded as required in accordance with workplace procedures 4.2. Waste and scrap material is removed for disposal or recycling as required 4.3. Work area is cleaned and rubbish disposed of as appropriate 4.4. Workplace documentation is completed as required 4.5. Tools and equipment are cleaned and stored following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the limited workplace technology related to the application of designs and/or patterns to glass surfaces

Required knowledge

- the qualities and characteristics of glass and materials, including the hazards and handling requirements
- procedures, techniques and means of applying patterns and designs to glass surfaces
- workplace safety system requirements related to the application of patterns and designs to glass surfaces
- workflow in relation to other stages of the work process

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and locate and apply relevant information to apply patterns and/or designs to glass surfaces
- Prepare to apply patterns and designs to glass surfaces
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - draw and cut freehand designs.
 - set up, process, upload and cut designs from computerised software programs
 - stage sandblasting on glass
 - stage screen printing on glass
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Template materials/patterns, masking materials, application equipment, workplace operating procedures, unprocessed glass, personal protective equipment and an appropriate work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant pattern/design process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the application of designs and/or patterns to glass surfaces • Work is generally performed individually, with general supervision and may be part of a production process • Work may be performed in workplaces which are involved in the manufacture of decorative glass products
<p>Patterns and designs</p>	<p>Patterns or designs may be applied to glass surfaces by chemical etching, sandblasting or screen printing</p>
<p>Tools and equipment may include:</p>	<ul style="list-style-type: none"> • sandblasting equipment • masking materials • templates • etching chemicals and screen printing equipment
<p>Materials are to include but are not limited to:</p>	<ul style="list-style-type: none"> • annealed • laminated • toughened glass and mirrors
<p>Personal protective equipment</p>	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices. It may include:</p>

RANGE STATEMENT	
	<ul style="list-style-type: none"> • gauntlets • gloves • safety glasses • hard hats • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Equipment manufacturer specifications and operational procedures • Safety standards include: personal protective equipment, OHS regulations and enterprise requirements • Materials safety data sheets • Workplace procedures relating to the application of patterns or designs to glass • Work instructions, including job sheets, plans, drawings and designs

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFGG3009B Set up and operate glass laminating equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to set up and operate glass laminating equipment. It includes the performance of operator maintenance.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Work requirements from work instructions to ascertain:</p> <ul style="list-style-type: none"> 1.1.1. material to be used 1.1.2. process required to complete work tasks 1.1.3. the type, thickness and colour of the interlayer 1.1.4. number of sheets to be laminated and holding area for completed items 1.1.5. the correct machine heat and pressure settings for the materials that are being used <p>1.2. Workplace health and safety requirements relevant to operating glass laminating equipment including personal protection needs, are observed throughout the work</p> <p>1.3. Work sequence is planned in a logical order to suit the job</p> <p>1.4. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, of the required quality, serviceable and in a safe condition</p> <p>1.5. Machines, cutting tools and jigs are identified and checked for safe and effective operation, including emergency stops, gauges, guards and controls</p> <p>1.6. Procedures are identified for checking:</p> <ul style="list-style-type: none"> 1.6.1. quality of materials and items produced 1.6.2. working condition of equipment 1.6.3. quality requirements for each stage of the laminating process <p>1.7. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Set up equipment	<p>2.1. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions</p> <p>2.2. Trial runs are conducted to check machine operation, accuracy and quality of finished work</p> <p>2.3. Necessary adjustments are made to machine settings</p>
3. Conduct glass laminating	<p>3.1. Glass to be laminated is prepared for the process in accordance with workplace procedures or industry</p>

ELEMENT	PERFORMANCE CRITERIA
operations	<p>practice</p> <p>3.2. Start-up and shutdown procedures for equipment used in the laminating process are completed in accordance with manufacturer instructions or workplace procedures</p> <p>3.3. Glass flopping and washing procedures are conducted in accordance with manufacturer instructions or workplace procedures</p> <p>3.4. Whiteroom procedures are conducted in accordance with manufacturer instructions or workplace procedures</p> <p>3.5. Whiteroom hoist is operated in accordance with manufacturer instructions or workplace procedures</p> <p>3.6. Pre-press oven and glass stacker are operated in accordance with manufacturer instructions or workplace procedures to recognised industry standards</p> <p>3.7. Air lifter is operated in accordance with manufacturer instructions or workplace procedures</p> <p>3.8. Autoclave is loaded, operated and unloaded in accordance with manufacturer instructions or workplace procedures</p> <p>3.9. Cutting table is operated to cut glass to required size (if applicable) in accordance with manufacturer instructions or workplace procedures</p> <p>3.10. FMF is operated in accordance with manufacturer instructions or workplace procedures</p>
4. Complete work and maintain equipment	<p>4.1. Product is inspected for quality of work and items which do not meet quality requirements discarded or returned for reprocessing in accordance with workplace procedures</p> <p>4.2. Completed work is placed in holding area in accordance with workplace procedures</p> <p>4.3. Work area is cleaned and rubbish disposed of as appropriate</p> <p>4.4. Equipment is cleaned and inspected for serviceability in accordance with workplace procedures</p> <p>4.5. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures</p> <p>4.6. Equipment and tooling is maintained in accordance with workplace procedures</p> <p>4.7. Workplace documentation is completed in</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>accordance with workplace requirements</p> <p>4.8. Tools, equipment and unused materials are removed and stored appropriately</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for handling and processing and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the workplace technology related to the operation of glass laminating equipment

Required knowledge

- procedures for the set up, operation and operator maintenance of glass laminating equipment
- workflow relating to the operation of glass laminating equipment.
- characteristics of materials used and uses of products produced in the glass laminating process
- workplace procedures for the reporting of material, product or equipment faults
- workplace safety system requirements related to the operation of glass laminating equipment

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and locate and apply relevant information to operate glass laminating equipment
- Plan the conduct of glass laminating operations
- Set up, operate, monitor and perform operator maintenance of glass laminating equipment
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - identify and demonstrate glass flopping and washing operation and procedures
 - identify and demonstrate the white room operation and procedures
 - safely load glass into the pre-press oven and stacker
 - operate the pre-press oven and stacker during the glass laminating process
 - operate an air lifter
 - operate an autoclave
 - safely complete the requirements of the packing area
 - operate a laminating cutting table
 - carry out post laminating procedures
 - perform testing, classification and marking of toughened glass in accordance with AS/NZS 2208 Safety glazing materials
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

EVIDENCE GUIDE	
Resource implications	Glass laminating equipment, workplace operating procedures, unprocessed materials, personal protective equipment and an appropriate work area.
Method of assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant glass laminating equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- This unit covers work involving the set up, operation and monitoring of glass laminating equipment
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of glass laminating machines
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures
- Work is generally performed individually, with general supervision and may be part of a production process

Glass laminating equipment

- Glass laminating equipment includes that equipment and machines involved in the process of laminating glass. This involves the insertion of an intermediary layer between two layers of glass
- Laminated glass includes:
 - safety
 - automotive
 - bullet and bandit resistant
 - patterned laminated glass

Tools and equipment are to include:

- glass flopping and washing machines
- white room
- hoist
- pre-press oven
- glass stacker

RANGE STATEMENT	
	<ul style="list-style-type: none"> • air lifter • autoclave • packing equipment • cutting machine • FMF machine • standards stamping equipment (including stamp)
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • annealed float • sheet and patterned glass
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • gauntlets • gloves • safety glasses • hard hats • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the setting up and operation of glass laminating machinery • Machine manufacturers' specifications and operational procedures • Workplace procedures relating to the handling and movement of glass • Work instructions including job sheets, cutting lists, plans, drawings and designs • Safety standards include personal protective equipment, OHS regulations and enterprise requirements • AS/NZS2208 Safety glazing material

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3010B Set up and operate glass toughening equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to set up and operate glass toughening equipment. It includes operator maintenance.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Work requirements from work instructions to ascertain:</p> <ul style="list-style-type: none"> 1.1.1. material to be used 1.1.2. process required to complete work tasks 1.1.3. the required machine settings and adjustments 1.1.4. number of sheets to be toughened and holding area for completed items <p>1.2. Workplace health and safety requirements relevant to operating glass toughening equipment, including personal protection needs, are observed throughout the work</p> <p>1.3. Work sequence is planned in a logical order to suit the job</p> <p>1.4. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, of the required quality, serviceable and in a safe condition</p> <p>1.5. Machines are identified and checked for safe and effective operation, including emergency stops, gauges, guards and controls</p> <p>1.6. Procedures are identified for checking:</p> <ul style="list-style-type: none"> 1.6.1. quality of materials and items produced 1.6.2. working condition of equipment 1.6.3. quality requirements for each stage of the toughening process <p>1.7. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Set up equipment	<p>2.1. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions</p> <p>2.2. Trial runs are conducted to check machine operation, accuracy and quality of finished work</p> <p>2.3. Necessary adjustments are made to machine settings</p>
3. Conduct glass toughening operations	<p>3.1. Glass to be toughened is prepared for process in accordance with workplace procedures or industry practice</p> <p>3.2. Glass to be toughened is positioned on furnace load</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>table and stamped with product identification in accordance with workplace procedures or industry practice</p> <p>3.3. Glass is loaded into furnace in accordance with manufacturers' instructions and workplace procedures</p> <p>3.4. Correct furnace pre-start, start-up and set-up procedures are completed in accordance with manufacturer instructions and workplace procedures</p> <p>3.5. Furnace operation is monitored and adjustments made as required in accordance with manufacturer instructions or workplace procedures</p> <p>3.6. Problems occurring during work operations are identified and reported to appropriate persons</p> <p>3.7. Correct furnace shut-down and end of shift procedures are followed in accordance with manufacturer instructions and workplace procedures</p> <p>3.8. Glass is unloaded from furnace in accordance with manufacturers' instructions and workplace procedures</p>
4. Complete work and maintain equipment	<p>4.1. Product is inspected for quality of work and items which do not meet quality requirements discarded or returned for reprocessing in accordance with workplace procedures</p> <p>4.2. Completed work is placed in holding area in accordance with workplace procedures</p> <p>4.3. Work area is cleaned and rubbish disposed of as appropriate</p> <p>4.4. Equipment is cleaned and inspected for serviceability in accordance with workplace procedures</p> <p>4.5. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures</p> <p>4.6. Equipment is maintained in accordance with workplace procedures</p> <p>4.7. Workplace documentation is completed in accordance with workplace requirements</p> <p>4.8. Tools, equipment and unused materials are removed and stored appropriate</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for handling and processing and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the workplace technology related to the operation of glass toughening equipment

Required knowledge

- procedures for the set up, operation and operator maintenance of glass toughening equipment
- workflow relating to the operation of glass toughening equipment
- workplace procedures for the reporting of material, product or equipment faults
- characteristics of materials used and uses of products produced in the glass toughening process
- identification of equipment, processes and procedures
- workplace safety system requirements related to the operation of glass toughening equipment

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and locate and apply relevant information to operate glass toughening equipment
- Plan the conduct of glass toughening operations
- Set up, operate, monitor and perform operator maintenance of glass toughening equipment
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - identify the features of the glass toughening process including the principles, purpose and properties of toughened glass
 - identify the procedures required in the glass toughening process
 - perform pre-inspection and preparation procedures on glass for toughening
 - safely load and operate a glass toughening furnace
 - perform testing, classification and marking of toughened glass in accordance with AS/NZS 2208 Safety glazing materials
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Glass toughening equipment, workplace operating procedures, unprocessed materials, personal protective equipment and an appropriate work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace

EVIDENCE GUIDE	
	<p>relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	<p>Assessment may occur on the job or in a workplace simulated facility with relevant glass toughening equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- This unit covers work involving the set up, operation and monitoring of equipment used to toughen glass
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of glass toughening machines and equipment
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- OH&S requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures
- Work is generally performed individually, with general supervision and may be part of a production process

Glass toughening equipment

Glass toughening equipment includes that equipment and machines involved in the process of toughening glass. This involves the controlled heating and cooling of glass.

Tools and equipment are to include:

- glass washing machines and toughening furnaces

Furnace controls may include but are not limited to:

- operating controls
- lift
- pump
- furnace lever
- furnace rollers
- quench potentiometer
- fans
- dampers

RANGE STATEMENT	
	<ul style="list-style-type: none"> actuators inlet veins and gearboxes
Materials are to include but are not limited to:	<ul style="list-style-type: none"> clear tinted and patterned annealed glass
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> gauntlets gloves safety glasses hard hats safety footwear aprons and overalls
Information and procedures	<ul style="list-style-type: none"> Workplace procedures relating to the setting up and operation of glass toughening equipment Machine manufacturer specifications and operational procedures Workplace procedures relating to the handling and movement of glass Work instructions, including job sheets, cutting lists, plans, drawings and designs Safety standards include: personal protective equipment, OHS regulations and enterprise requirements AS/NZS 2208 Safety glazing materials

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3011B Set up and operate glass silvering equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to set up and operate glass silvering equipment.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Work requirements from work instructions to ascertain:</p> <ul style="list-style-type: none"> 1.1.1. material to be used 1.1.2. process required to complete work tasks 1.1.3. number of sheets to be silvered and holding area for completed items <p>1.2. Workplace health and safety requirements relevant to operating glass silvering equipment including personal protection needs, are observed throughout the work</p> <p>1.3. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p> <p>1.4. Work sequence is planned in a logical order to suit the job</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, of the required quality, serviceable and in a safe condition</p> <p>1.6. Machines are identified and checked for safe and effective operation, including emergency stops, gauges, guards and controls</p> <p>1.7. Procedures are identified for checking:</p> <ul style="list-style-type: none"> 1.7.1. quality of materials and items produced 1.7.2. working condition of equipment 1.7.3. quality requirements for each stage of the silvering process <p>1.8. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p> <p>1.9. The processes for obtaining materials and moving completed work to the next process are identified</p>
2. Prepare glass for silvering	<p>2.1. If applicable, existing silver is removed by acid washing, cleaning and/or polishing</p> <p>2.2. Glass to be silvered is washed with detergent in accordance with workplace procedures or industry practice</p> <p>2.3. Glass to be silvered is rinsed with demineralised</p>

ELEMENT	PERFORMANCE CRITERIA
	water in accordance with workplace procedures or industry practice
3. Conduct glass silvering operations	<p>3.1. Tinning solution is applied in accordance with workplace procedures or industry practice</p> <p>3.2. Glass is rinsed with demineralised water in accordance with workplace procedures or industry practice</p> <p>3.3. Silver solution is applied to glass in accordance with workplace procedures or industry practice</p> <p>3.4. Glass is washed and blow dried in accordance with workplace procedures or industry practice</p> <p>3.5. Backing paint is applied in accordance with workplace procedures or industry practice</p>
4. Complete work	<p>4.1. Product is inspected for quality of work and items which do not meet quality requirements discarded or returned for reprocessing in accordance with workplace procedures</p> <p>4.2. Completed work is placed in holding area in accordance with workplace procedures</p> <p>4.3. Work area is cleaned and rubbish disposed of as appropriate</p> <p>4.4. Equipment is cleaned and inspected for serviceability and stored in accordance with workplace procedures</p> <p>4.5. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures</p> <p>4.6. Workplace documentation is completed in accordance with workplace requirements</p> <p>4.7. Tools, equipment and unused materials are removed and stored appropriately</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for handling and processing and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the workplace technology related to the operation of glass silvering equipment

Required knowledge

- procedures for the planning, preparation, operation and completion of glass silvering operations
- workflow in relation to the operation of glass silvering equipment
- workplace procedures for the reporting of material, product or equipment faults
- relevant Australian Safety Standards
- identify, handle and store hazardous chemicals
- characteristics of materials used and uses of products produced by glass silvering operations
- workplace safety system requirements related to the operation of glass silvering equipment

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and locate and apply relevant information to operate glass silvering equipment
- Plan and prepare for the conduct of glass silvering operations
- Conduct glass silvering operations
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - prepare silvering formulae
 - perform equipment checks
 - set up and prepare silvering equipment
 - clean and prepare glass for silvering
 - apply tinning, silvering and copper solutions on glass
 - dry and apply packing paint
 - strip, buff, clean, prepare and re-silver mirrors
 - handle and store mirrors
 - clean solution tanks, lines, spray guns and equipment after use
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Glass silvering equipment, demineralised water, acid, silvering chemicals, backing paint, workplace operating procedures, unprocessed materials, personal protective equipment and an appropriate work area.

Method of assessment

Assessment methods must confirm consistency of

EVIDENCE GUIDE	
	<p>performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	<p>Assessment may occur on the job or in a workplace simulated facility with relevant glass silvering equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of glass silvering machines and equipment
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures
- Work is generally performed individually, with general supervision and may be part of a production process

Glass silvering

Glass silvering involves processes and equipment to silver glass for the manufacture of mirrors and other glass products

Tools and equipment are to include:

- semi-automatic and computer-navigated silvering equipment
- buffing and cleaning tables
- spray booths
- copper plating electrodes
- extractor fans
- dual nozzle spray guns
- compressors
- solution containers
- heated drying racks
- water distiller
- silvering formulas
- tinning solution
- backing paint and stripping acid tanks for resilvering

RANGE STATEMENT	
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • annealed • sheet • laminated and toughened glass
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • gauntlets • gloves • safety glasses • respiratory masks • hard hats • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the setting up and operation of glass silvering processes and equipment • Equipment manufacturer specifications and operational procedures • Workplace procedures relating to the handling and movement of glass • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Safety standards include personal protective equipment, OHS regulations and enterprise requirements • Australian Standards

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3012B Set up and operate insulated glass unit manufacturing equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up and operate insulated glass unit (IGU) manufacturing equipment. It includes the conduct of associated IGU quality testing.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Work requirements from work instructions to ascertain:</p> <ul style="list-style-type: none"> 1.1.1. material to be used 1.1.2. process required to complete work tasks 1.1.3. the required size of the units 1.1.4. number of insulated glass units required and holding area for completed items <p>1.2. Workplace health and safety requirements relevant to operating insulating glass equipment including personal protection needs, are observed throughout the work</p> <p>1.3. Work sequence is planned in a logical order to suit the job</p> <p>1.4. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, of the required quality, serviceable and in a safe condition</p> <p>1.5. IGU machines, tools and equipment are identified and checked for safe and effective operation, including emergency stops, gauges, guards and controls</p> <p>1.6. Procedures are identified for checking:</p> <ul style="list-style-type: none"> 1.6.1. quality of materials and items produced 1.6.2. working condition of equipment 1.6.3. quality requirements for each stage of the IGU manufacturing process <p>1.7. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Set up equipment	<p>2.1. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions</p> <p>2.2. IGU spacers are cut and sorted into order of run in accordance with workplace procedures</p> <p>2.3. Desiccant to be used in process is tested in accordance with industry standards and workplace practices</p> <p>2.4. Trial runs are conducted to check machine operation, accuracy and quality of finished work</p>

ELEMENT	PERFORMANCE CRITERIA
<p>3. Conduct insulated glass unit manufacturing operations</p>	<p>2.5. Necessary adjustments are made to machine settings</p> <p>3.1. Glass sheets are loaded into IGU machine using the appropriate mechanical handling equipment</p> <p>3.2. IGU spacers are assembled in accordance with specification/order and workplace procedures</p> <p>3.3. IGU machine is operated to wash and dry glass and to press the unit</p> <p>3.4. Unit is unloaded from IGU machine and relocated for sealing using appropriate mechanical handling equipment in accordance with workplace practices</p> <p>3.5. Primary and secondary seal equipment is operated in accordance with workplace procedures</p> <p>3.6. Testing for water vapour (dewpoint) and integrity of sealing (moisture) is conducted in accordance with workplace procedures</p> <p>3.7. Serviceable units are labelled and stored in accordance with industry standards and workplace procedures, with items not meeting quality requirements being discarded or returned for reprocessing in accordance with workplace procedures</p>
<p>4. Complete work and maintain equipment</p>	<p>4.1. Work area is cleaned and rubbish disposed of as appropriate</p> <p>4.2. IGU machine is cleaned and inspected for serviceability in accordance with workplace procedures</p> <p>4.3. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures</p> <p>4.4. Equipment and tooling is maintained in accordance with workplace procedures</p> <p>4.5. Documentation is completed in accordance with workplace requirements</p> <p>4.6. Tools, equipment and unused materials are removed and stored appropriately</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for handling and processing and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the workplace technology related to the operation of insulated glass unit manufacturing equipment

Required knowledge

- procedures for the set up, operation and operator maintenance of insulated glass unit manufacturing equipment
- workflow relating to the operation of insulated glass unit manufacturing equipment
- characteristics of materials used and uses of products produced in the insulated glass unit manufacturing process
- workplace procedures for the reporting of material, product or equipment faults
- workplace safety system requirements related to the operation of insulated glass unit manufacturing equipment

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and locate and apply relevant information to the operation of insulated glass unit manufacturing equipment
- Plan the conduct of insulated glass unit manufacturing operations
- Set up, operate and monitor insulated glass unit (IGU) manufacturing equipment and the quality testing of IGU
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to prepare, set up, manufacture and conduct the appropriate quality testing of five differing IGU patterns to the capacity of the IGU machine
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Insulated glass unit manufacturing equipment, workplace operating procedures, unprocessed materials, personal protective equipment and an appropriate work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be in conjunction with assessment of other relevant units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant insulated glass unit

EVIDENCE GUIDE	
	manufacturing equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • This unit covers work involving the set up, operation and monitoring of insulated glass unit manufacturing equipment, including quality testing of IGU • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of insulating glass unit manufacturing machines • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • OH&S requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures • Work is generally performed individually, with general supervision and may be part of a production process
Insulated glass units (IGU)	Insulated glass units are two sheets of glass that are separated by a spacer, sealed to form an airtight unit
Tools and equipment are to include:	<ul style="list-style-type: none"> • cutting equipment (saws, etc.) • spacer preparation equipment (appropriate size) • sieve machine and desiccant equipment • primary seal equipment • secondary seal equipment • basic hand tools (screwdriver, scraper, etc.) • mechanical handling equipment
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • customer requirements for glass (annealed • toughened or laminated) • corner keys for spacers

RANGE STATEMENT	
	<ul style="list-style-type: none"> • appropriate primary (polyisobutylene) and secondary sealant (polysulphide) and separation paper
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • gauntlets • gloves • safety glasses • hard hats • safety footwear • aprons • hearing protection • overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the setting up and operation of insulated glass unit manufacturing machinery • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the handling and movement of glass • Work instructions including job sheets, cutting lists, plans, drawings and designs • Safety standards include personal protective equipment, OHS regulations and enterprise requirements • Australian Standards: <ul style="list-style-type: none"> • AS1288 Glass in buildings, selection and installation. • AS2208 Safety glazing materials in buildings • AS4666 Insulating glass units • AS4667 Quality requirements for cut to size and processed glass

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3013B Construct and repair leadlight panels

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to construct and repair leadlight panels.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify the work requirements	1.1. Purpose of the leadlight panel is established 1.2. Performance requirement of the panel is identified in terms of safety, quality and function 1.3. Construction method and materials to be used in the panel to be constructed or repaired are identified 1.4. Leadlight panel to be repaired is inspected to identify faults 1.5. Faults found are compared with customer requirements and any previous identified faults
2. Plan leadlight panel construction/repair	2.1. Plan or design of leadlight panel to be constructed/repared is analysed to identify work requirements, methods and/or specifications 2.2. Workplace health and safety requirements for construction and repair of leadlight panels, including personal protection needs, are observed throughout the work 2.3. Work sequences are identified and a personal work plan is developed when required 2.4. Steps or stages in construction/repair are planned, noting check points for (any) measurements and tests 2.5. Approval of work construction plan is obtained as required by workplace procedures 2.6. Suitable work area is identified
3. Identify suitable materials and equipment	3.1. Tools are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 3.2. Leadlight construction materials are selected according to specification of performance requirements, proposed use, cost and availability of materials, if required, matching the original: <ul style="list-style-type: none"> 3.2.1. texture 3.2.2. colour 3.2.3. thickness 3.2.4. opacity 3.3. Equipment suitable for working the chosen material is identified
4. Construct/repair the leadlight panel	4.1. Plan is followed to construct/repair the leadlight panel

ELEMENT	PERFORMANCE CRITERIA
	<p>4.2. Checks are conducted at the identified points</p> <p>4.3. Modifications are identified and recommended within workplace procedures</p> <p>4.4. Modifications to the plan are documented and appropriate approvals are sought in accordance with workplace procedures</p>
5. Complete work	<p>5.1. Leadlight panel is inspected for quality of work and repaired or reconstructed as required in accordance with workplace procedures</p> <p>5.2. Material which can be reused is collected and stored</p> <p>5.3. Waste and scrap material is removed for disposal or recycling as required</p> <p>5.4. Work area is cleaned and rubbish disposed of as appropriate</p> <p>5.5. Equipment is cleaned and stored according to workplace requirements</p> <p>5.6. Workplace documentation is completed in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the limited workplace technology related to the construction/repair of leadlight panels

Required knowledge

- end use of the panel and required safety, quality and structural standards
- characteristics, including the hazards and workplace safety system requirements associated with the materials used in leadlight panel construction
- operation of tools and equipment used in constructing/repairing leadlight panels
- processes and procedures involved in the construction/repair process
- the impact of design features of the leadlight panel on purpose, materials and construction
- relevant Australian Standards

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction to identify requirements and plan the process to construct/repair leadlight panels
- Select and use appropriate materials and processes for the panel being constructed/repared
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - construct leadlight panels
 - measure openings for leadlight panels
 - design, including construction of cartoon
 - construct templates
 - identify and select materials, including glass and lead came
 - cut basic and complex shapes in clear, patterned and coloured glass
 - lead up, flux and solder
 - weatherproof, cement, pick and polish
 - glaze, including putty facing and beading up
 - may include reinforcement bar installation
- Repair leadlight panels:
 - remove leadlight from opening to be repaired
 - construct templates, cartoons and rubbings
 - identify and select replacement materials
 - disassemble lead and broken glass panels
 - cut glass to suit
 - lead up, weatherproof, cement, pick and polish
 - reglaze repaired leadlight panel

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
Resource implications	Appropriate leadlighting materials, work area, work order, specifications, tools, personal protective equipment, equipment and consumables.
Method of assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant leadlight construction/repair equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the construction/repair of leadlight panels
- Work involves measuring, design and selection of materials and tools, and assembly, weatherproofing and polishing of leadlight panels
- Work involves removal, disassembling, selection of replacement materials, and assembly, weatherproofing, polishing and glazing of repaired leadlight panels
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures
- Work is generally performed individually, with general supervision and may be part of a production process

Repair methods may include:

- releading
- Dutchman's repair and lead lifting

Tools and equipment may include:

- timber benches
- light boxes
- glass grinders
- lead knives
- lead vice
- lathekins
- farrier's nails
- glass cutters
- grozing and small running pliers

RANGE STATEMENT	
	<ul style="list-style-type: none"> • soldering irons and bits • suede • cleaning and polishing brushers and pickers
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • coloured/plain glass panels • patterns/templates • timber lathes • ornamental fittings • lead came • solder and fluxes
Occupational Health and Safety	<p>OHS requirements may address:</p> <ul style="list-style-type: none"> • material handling • work processing • work space and ventilation considerations • material disposal processes
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • glass handling gloves • safety glasses
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to constructing/repairing leadlight panels • Workplace procedures relating to the handling and movement of glass and glass panels • Equipment manufacturers' specifications and operational procedures • Work instructions, including job sheets, cutting lists, plans, patterns, templates, drawings and/or designs • Safety standards include personal protective equipment, OHS regulations and enterprise requirements • Quality and Australian Standards and procedures

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3014 Prepare and install mirrors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to prepare and install mirrors.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and plan work requirement	<p>1.1. Work requirements in the form of type, pattern/plan and quantity of mirrors to be prepared and installed are identified from work instructions</p> <p>1.2. Workplace health and safety requirements for fabrication and installation of mirrors, including personal protection needs, are observed throughout the work</p> <p>1.3. Work sequence is planned in a logical order to suit the job</p> <p>1.4. Quantities of materials required are calculated from plans or work instructions or by measuring the installation site</p> <p>1.5. Fixing and joining devices or materials are selected in line with specifications or type of materials to be joined and the surface on which the mirror is to be installed</p> <p>1.6. Tools and equipment suitable to the work method are identified</p>
2. Prepare for work	<p>2.1. Compatible materials, fixings, tools and equipment needed to complete the work are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.2. Components of the mirror are checked against specifications or job order for: size, quantity, finish and profile</p>
3. Fabricate and install mirror	<p>3.1. Frame, if required, is fabricated in accordance with workplace procedures or industry practice</p> <p>3.2. Mirror glass, if required, is cut to size in accordance with workplace procedures or industry practice</p> <p>3.3. Mirror is edgeworked, if required, in accordance with workplace procedures or industry practice</p> <p>3.4. Holes, if required, are drilled in frame or mirror in accordance with workplace procedures or industry practice</p> <p>3.5. Mirror is installed using appropriate fixing method in accordance with workplace procedures or industry practice</p>
4. Complete work	<p>4.1. Installed mirror is inspected for quality of work and repaired, refabricated or reinstalled as required in accordance with workplace procedures</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>4.2. Waste, unused and scrap material is removed for disposal or recycling as required</p> <p>4.3. Work area is cleaned and rubbish disposed of as appropriate</p> <p>4.4. Tools, equipment and unused materials are removed and stored appropriately according to workplace requirements</p> <p>4.5. Workplace documentation is completed in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the limited workplace technology related to the fabrication and installation of mirrors

Required knowledge

- workflow in relation to the fabrication and installation of mirrors
- workplace safety system requirements related to the fabrication and installation of mirrors
- characteristics of materials used and uses of products produced
- identification of equipment, processes and procedures related to the fabrication and installation of mirrors
- relevant Australian Standards

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and locate and apply relevant information to fabricate and install mirrors
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - measure for mirror installations
 - cut and float mirror up to 6 mm, including vinyl backed
 - carry out edgeworking
 - drill holes in mirrors
 - prepare walls
 - construct and fit mirror frames and J-mould
 - identify and use water, spirit, dumpy and laser levels
 - set plumb and level lines
 - fit framed, wall, safety and security mirrors, including return mirrors with minimal deflection
 - clean and present finished mirrors
 - calculate the cost of mirrors, edgework, materials and labour
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Mirrors, aluminium framing material, fixing/fasteners, workplace operating procedures, personal protective equipment and an appropriate work area.

Method of assessment

Assessment methods must confirm consistency of

EVIDENCE GUIDE	
	<p>performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	<p>Assessment may occur on the job or in a workplace simulated facility with relevant fabrication and installation equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the fabrication and installation process. This may be demonstrated either individually or in a team environment • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the planning, fabrication and installation of mirrors • Work is generally performed individually, with general supervision and may be part of a production process
<p>Preparing and installing mirrors involves:</p>	<ul style="list-style-type: none"> • the fabrication and installation of mirrors to satisfy customer/work orders
<p>Mirrors may include:</p>	<ul style="list-style-type: none"> • framed • frameless • wall • return • safety and security mirrors
<p>Tools and equipment may include:</p>	<ul style="list-style-type: none"> • tungsten wheel glass cutters • speed cutters • straight edges and squares • plate and running pliers • glass lifting and handling equipment • personal safety equipment

RANGE STATEMENT	
	<ul style="list-style-type: none"> • glass edging equipment • diamond drills and saws • water • spirit • dumpy and laser levels • plumb bobs • chalk lines • tape measures • portable drills • general hand tools
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • timber and metal framing materials • J-mould • float and vinyl backed mirrors • fixings and fasteners
Fixings and fasteners include:	<ul style="list-style-type: none"> • adhesive tapes • screws and rosettes • mirror and spring clips • hollow wall fasteners • rawl plugs • cloth and glues • and non-acidic silicones
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • gauntlets • gloves • safety glasses • hard hats • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the fabrication and installation of mirrors • Equipment or tool manufacturer specifications and operational procedures • Work instructions, including job sheets, plans, cutting lists, drawings and designs • Safety standards include personal protective equipment, OHS regulations and enterprise requirements • AS1288, 4667

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3015B Fabricate and install shower screens and wardrobe doors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to plan, fabricate and install shower screens and wardrobe doors.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for work	<p>1.1. Work requirements in the form of type of shower screen/wardrobe door to be fabricated and installed are identified from work instructions. This includes the identification of its pattern or plan</p> <p>1.2. Workplace health and safety requirements for fabrication and installation of shower screens and wardrobe doors, including personal protection needs, are observed throughout the work</p> <p>1.3. The process for fabricating and installing shower screens and wardrobe doors is identified</p> <p>1.4. Glass fixing method and joining devices or materials are identified in line with specifications or type of materials to be used and Australian Standards</p> <p>1.5. Quantities of materials required are calculated from plans or work instructions or by measuring the fixture opening</p> <p>1.6. Tools and equipment appropriate to the fixing method are identified</p>
2. Prepare for work	<p>2.1. Work sequence is determined in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Components of the shower screen/wardrobe door are checked against specifications or job order for: size, quantity, finish and profile</p>
3. Fabricate and install shower screen/wardrobe door	<p>3.1. If required, aluminium frame is fabricated in accordance with workplace procedures or industry practice</p> <p>3.2. Fittings are attached to screen in accordance with workplace procedures or industry practice</p> <p>3.3. Shower screen/wardrobe door is installed in shower opening/wardrobe in accordance with workplace procedures or industry practice</p> <p>3.4. Shower screen is waterproof sealed in accordance with workplace procedures or industry practice</p>
4. Complete work	<p>4.1. Shower screen/wardrobe door is inspected for quality of work and repaired, refabricated or reinstalled as required in accordance with workplace</p>

ELEMENT	PERFORMANCE CRITERIA
	procedures 4.2. Material which can be reused is collected and stored 4.3. Waste and scrap material is removed for disposal or recycling as required 4.4. Work area is cleaned and rubbish disposed of as appropriate 4.5. Tools, equipment and unused materials are cleaned and removed and stored appropriately 4.6. Workplace documentation is completed in accordance with workplace requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding reworking and wastage
- use the limited workplace technology related to the fabrication and installation of shower screens and wardrobe doors

Required knowledge

- workflow in relation to the fabrication and installation of shower screens and wardrobe doors
- characteristics of materials used and uses of products produced
- workplace safety system requirements related to the fabrication and installation of shower screens and wardrobe doors
- identification of equipment, processes and procedures
- relevant Australian Standards

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Plan the fabrication and installation of shower screens and wardrobe doors
- Interpret work order/job instruction and locate and apply relevant information to fabricate and install shower screens and wardrobe doors
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - measure for installation each of sliding, pivot, bi-fold, semi-frameless and frameless shower screens and sliding wardrobe doors
 - work from product specification data sheets
 - identify and select product materials
 - select glass in accordance with AS1288
 - fabricate frame and sash components, including cutting, tooling and drilling
 - identify, select and install component hardware including weather seals, wheels, hinges, guides and handles
 - assemble frames, including glass and gaskets
 - install shower screens and wardrobe doors
 - calculate the cost of shower screens and wardrobe doors
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Shower screen/wardrobe door glass, aluminium framing material, fixtures, waterproof sealant, workplace operating procedures, personal protective equipment and

EVIDENCE GUIDE	
	an appropriate work area.
Method of assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the fabrication and installation process • OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work is generally performed individually, with general supervision and may be part of a production process
<p>Shower screens are glass panels and may include:</p>	<ul style="list-style-type: none"> • framed • semi-frameless and frameless screens • sliding screens • pivot screens and returns
<p>Wardrobe doors</p>	<p>Wardrobe doors may be fitted with safety vinyl backed mirror and textured vinyl coated board</p>
<p>Tools and equipment may include:</p>	<ul style="list-style-type: none"> • power saws • pneumatic • hydraulic and manual presses • tooling • drills • screwdrivers and rubber mallets and general glazing tools • spirit and laser levels
<p>Materials are to include but are not limited to:</p>	<ul style="list-style-type: none"> • aluminium shower screen and wardrobe extrusions • laminated • toughened and organic coated glass

RANGE STATEMENT	
	<ul style="list-style-type: none"> • vinyl backed mirror • textured vinyl board • glazing and bump rubbers • shower screen • wardrobe hardware and sealants
Fittings may include:	<ul style="list-style-type: none"> • wheels • hinges • handles • pivot blocks • corner blocks and fasteners
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • gauntlets • gloves • safety glasses • hard hats • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the fabrication and installation of shower screens and wardrobe doors • Equipment or tool manufacturers' specifications and operational procedures • Work instructions including job sheets, plans, drawings and designs • Safety standards include personal protective equipment, OHS regulations and enterprise requirements • AS1288

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3016B Fabricate and install residential windows and doors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to plan, fabricate and install residential windows and doors.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for work	<p>1.1. Work requirements in the form of type of window or door to be fabricated and installed are identified from work instructions. This includes the identification of its pattern or plan</p> <p>1.2. Workplace health and safety requirements for fabrication and installation of windows and doors including personal protection needs, are observed throughout the work</p> <p>1.3. The process for fabricating and installing windows and doors is identified</p> <p>1.4. Types and quantities of materials required are calculated from plans or work instructions or by measuring the fixture opening in accordance with Australian Standards and industry practice</p> <p>1.5. Cutting lists are prepared from plans, work instructions or measurements of opening to suit the window or door to be installed</p> <p>1.6. Fittings, fixings and joining devices or materials are selected in line with specifications or type of materials to be joined or fixed and Australian standards</p> <p>1.7. Tools and equipment appropriate to the fixing method are identified</p>
2. Prepare for work	<p>2.1. Work sequence is determined in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Components of the window or door are checked against specifications or job order for: size, quantity, finish and profile</p>
3. Fabricate and install window or door	<p>3.1. Materials are measured and marked to cutting list requirements and most economical use of materials</p> <p>3.2. Materials are cut to cutting list requirements in accordance with workplace procedures or industry practice</p> <p>3.3. Components of window or door are assembled in accordance with recognised industry standards</p> <p>3.4. Fittings are installed to window or door in accordance with workplace procedures or industry</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>practice</p> <p>3.5. Window or door is installed in opening using appropriate fixing method in accordance with recognised industry standard</p>
4. Complete work	<p>4.1. Installed window or door is inspected for quality of work and repaired, re-fabricated or re-installed as required in accordance with workplace procedures</p> <p>4.2. Material which can be re-used is collected and stored</p> <p>4.3. Waste and scrap material is removed for disposal or recycling as required</p> <p>4.4. Work area is cleaned and rubbish disposed of as appropriate</p> <p>4.5. Tools, equipment and unused materials are cleaned and removed and stored appropriately</p> <p>4.6. Workplace documentation is completed in accordance with workplace requirements</p>

Required Skills and Knowledge

Required knowledge

- workflow in relation to the fabrication and installation of windows and doors
- characteristics of materials used and uses of products produced
- workplace safety system requirements related to the fabrication and installation of windows and doors
- identification of equipment, processes and procedures
- relevant Australian standards

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Plan the fabrication and installation of windows and doors
- Interpret work order/job instruction and locate and apply relevant information to fabricate and install windows and doors
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - measure for the installation of windows and doors
 - work from product specification data sheets and specifier software programs
 - identify and select product materials, including selection of mullions and transoms in relation to wind loading.
 - fabricate frame and sash components including cutting, tooling, routing, milling, drilling and crimping
 - identify, select and install component hardware, including weather seals, wheels, stays, hinges, guides and locks
 - apply the window energy rating system (WERS)
 - select and cut glass in accordance with AS1288 and AS4667
 - assemble frames, including glass, gaskets, tapes, sealants, adhesives, fasteners, reveal linings and flashings in accordance with AS2047, section 6
 - label and certify frames in accordance with AS2047, section 8
 - install residential windows and doors
 - calculate cost of residential windows and doors

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
Resource implications	Aluminium framing material, timber framing material, door or window glass, fittings, fixing/fasteners, workplace operating procedures, personal protective equipment and an appropriate work area.
Method of assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant fabrication and installation equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the fabrication and installation process • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations, Australian standards, building codes and organisation insurance requirements • OHS requirements may include legislation, Australian standards, building codes, material safety management systems and local safe operating procedures • Work is generally performed individually, with general supervision and may be part of a production process
Residential windows may include:	<ul style="list-style-type: none"> • aluminium sliding • double hung • casement and awning windows • louvre windows and double glazed windows
Residential doors may include:	<ul style="list-style-type: none"> • aluminium sliding • hinged and bi-fold doors
Tools and equipment may include:	<ul style="list-style-type: none"> • assembly benches • drop and up-cut saws • pneumatic • hydraulic and manual presses • frame and sash tooling • copy routers • end millers • crimpers • electric and pneumatic powered drills and screwdrivers • pop rivet guns • glue guns and general hand tools

RANGE STATEMENT	
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • aluminium alloys and steel • hardware • fasteners • plastics • sealants • tapes • vinyl • gaskets • timber reveals and flashings
Glass includes:	<ul style="list-style-type: none"> • annealed glass • safety glass • patterned glass • tinted • heat reflective and insulated glass units
Hardware includes:	<ul style="list-style-type: none"> • locks • wheels • stays • hinges • springs and balances and any component required for the operation of residential windows
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • gauntlets • gloves • safety glasses • hard hats • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the fabrication and installation of windows and doors • Equipment or tool manufacturer specifications and operational procedures • Work instructions, including job sheets, plans, drawings and designs • Safety standards include personal protective equipment, OHS regulations and enterprise

RANGE STATEMENT

	requirements <ul style="list-style-type: none"> • Australian standards: <ul style="list-style-type: none"> • AS2047 Windows in buildings, selection and installation • AS1288 Glass in buildings, selection and installation • AS4667 Quality requirements for cut to size and processed glass • AS4666 Insulating glass units • WERS - The Window Energy Rating System
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Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3017B Fabricate and install commercial glazing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to plan, fabricate and install glass in commercial shopfronts, doors and windows.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1. Work requirements in the form of type of glass, frames and the method of fixing are identified from work instructions</p> <p>1.2. Workplace health and safety requirements for fabrication and installation of commercial glazing, including personal protection needs, are identified and observed throughout the work</p> <p>1.3. The process for fabricating and installing commercial glazing is identified</p>
2. Prepare for work	<p>2.1. Work sequence is planned in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials, other than glass and frames, are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Type of glass to be fitted and frames is selected to match:</p> <p>2.3.1. customer order</p> <p>2.3.2. requirements for security, noise or light control</p> <p>2.3.3. Australian Standards</p> <p>2.4. Glass is checked for type, size and imperfections</p> <p>2.5. Glass fixing method is selected according to:</p> <p>2.5.1. specification</p> <p>2.5.2. type of glass and frame</p> <p>2.5.3. security requirements</p> <p>2.5.4. sealing methods</p> <p>2.5.5. Australian Standards</p>
3. Identify site conditions and restraints	<p>3.1. Site safety hazards are recognised and corrective action taken to reduce injury to self and others</p> <p>3.2. Other on-site difficulties are identified and action taken to resolve in accordance with regulations and enterprise agreements</p> <p>3.3. Special characteristics of the glass aperture are identified in relation to the effect of the glass fitting process on the finished job</p> <p>3.4. Covering material is applied where necessary to protect existing fixtures and fittings</p>
4. Prepare frame	4.1. Frame condition is assessed to ensure suitability for

ELEMENT	PERFORMANCE CRITERIA
	<p>glazing in accordance with customer order and Australian Standards</p> <p>4.2. Defective frames are reported for repair or replacement in accordance with workplace procedures</p> <p>4.3. Frame is prepared (if required) to receive glass by:</p> <p>4.3.1. cleaning</p> <p>4.3.2. surface preparation (if required)</p> <p>4.3.3. checking size against specification</p> <p>4.4. Fixing and sealing materials are prepared by mixing or cutting to length as appropriate</p>
5. Fit glass	<p>5.1. Glass is fixed to the frame using the selected method and in accordance with recognised Australian and industry standards</p> <p>5.2. Solvents and sealants are used in accordance with manufacturer recommendations and Australian Standards</p> <p>5.3. Excess sealing material is removed</p> <p>5.4. Glass and frame are cleaned after fixing</p>
6. Complete work	<p>6.1. Completed installation is checked to ensure compliance with customer requirements, specifications and Australian Standards</p> <p>6.2. Workplace documentation is completed in accordance with workplace requirements</p> <p>6.3. Work area is cleaned and left in a safe condition and rubbish removed from work area and disposed of in accordance with relevant statutory requirements and workplace requirements</p> <p>6.4. Tools, equipment and materials are cleaned and stored following workplace procedures</p> <p>6.5. Waste and scrap material is removed for disposal or recycling as required</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the limited workplace technology related to the fabrication and installation of commercial glazing

Required knowledge

- the types, qualities and characteristics of glass, including the hazards and handling requirements
- the techniques, methods, materials and process of fabricating and installing commercial glazing
- workflow in relation to the fabrication and installation of commercial glazing
- relevant Australian Standards
- the application and operation of tools and equipment used
- identification of equipment, processes and procedures
- workplace safety system requirements related to the fabrication and installation of commercial glazing

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and locate and apply relevant information to fabricate and install commercial glazing
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- To complete a minimum of:
 - measuring for the installation of commercial windows, shopfronts and doors
 - work from product specification data sheets and specified software programs
 - identify and select product materials in relation to wind loading requirements.
 - fabricate frame and sash components including cutting, tooling/milling, routing, drilling and crimping
 - identify, select and install component hardware, including weather seals, wheels, stays, hinges and COC pivots, guides and locks
 - select and cut glass to AS1288 and AS4667
 - assemble frames, including glass, gaskets, tapes, sealants, adhesives, fasteners in accordance with AS2047
 - install commercial windows, framed and frameless shop fronts and returns, supporting fins and doors
 - calculate the cost of commercial windows, shopfronts and doors
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

EVIDENCE GUIDE	
Resource implications	Frames, glass, fixing material, sealants, workplace operating procedures and work orders, personal protective equipment and an appropriate work area/site.
Method of assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant fabrication and installation equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the planning and fitting of glass in commercial applications
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures

Commercial fabrication and glazing

Commercial fabrication and glazing covers work involving the fabrication, assembly, glazing and installation of framed and frameless shop fronts and returns, fixed and operable windows, hinged, pivot, sliding and automatic doors. It may include:

- toughened glass assemblies
- aluminium glazing systems, including planar assemblies, curtain wall systems, spider assemblies, panel wall systems (hung and stacked)
- Armourview balustrading
- watertight glazing techniques, including use of silicone

Tools and equipment may include:

- assembly benches
- drop and up-cut saws
- pneumatic
- hydraulic and manual presses
- frame and sash tooling
- copy routers
- end millers
- crimpers

RANGE STATEMENT	
	<ul style="list-style-type: none"> • electric and pneumatic powered drills and screwdrivers • pop rivet guns • glue guns and general hand tools
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • all forms of flat glass and acrylic glazing products • plastic • aluminium • steel • solid timber • gaskets • sealants and adhesives
Types of glass may include but are not limited to:	<ul style="list-style-type: none"> • annealed glass • toughened glass • laminated glass • bandit resistant glass • bullet resistant glass and heat reflective glass
Methods of glazing may include:	<ul style="list-style-type: none"> • pocket • flush • channel • and double glazing
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • gauntlets • gloves • safety glasses • hard hats • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to fitting of glass for commercial applications • On-site procedures and regulations relating to the handling and movement of glass • Work instructions including job sheets, cutting lists, plans, patterns, templates, drawings and/or designs • Safety standards, include personal protective equipment, OHS regulations and enterprise requirements

RANGE STATEMENT

	<ul style="list-style-type: none"> • Australian Standards: <ul style="list-style-type: none"> • AS1228 Glass in buildings, selection and installation • AS4667 Quality requirements for cut size and processed glass • AS2047 Windows in buildings, selection and installation • AS2208 Safety glazing materials in buildings • AS2343 Bullet resistant panels and elements • AS3555 Intruder resistant building panels
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Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3018B Prepare and install architectural engineered glazing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to prepare and install glass in structural and other architectural engineered applications.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1. Work requirements in the form of type of glass, frames and the method of fixing are identified from work instructions</p> <p>1.2. Workplace health and safety requirements for fabrication and installation of architectural engineered glazing, including personal protection needs, are identified and observed throughout the work</p> <p>1.3. The process for fabricating and installing architectural engineered glazing is identified</p>
2. Prepare for work	<p>2.1. Work sequence is planned in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials, other than glass and frames, are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Type of glass to be fitted and frames are selected to match:</p> <p>2.3.1. customer order</p> <p>2.3.2. requirements for security, noise or light control</p> <p>2.3.3. relevant Australian Standard</p> <p>2.4. Glass is checked for type, size and imperfections</p> <p>2.5. Glass fixing method is selected according to:</p> <p>2.5.1. specification</p> <p>2.5.2. type of glass and frame</p> <p>2.5.3. security requirements</p> <p>2.5.4. sealing methods</p> <p>2.5.5. relevant Australian Standard</p> <p>2.6. Frame or opening is prepared to receive glass by:</p> <p>2.6.1. cleaning</p> <p>2.6.2. surface preparation (if required)</p> <p>2.6.3. checking size against specification</p> <p>2.7. Fixing and sealing materials are prepared by mixing or cutting to length as appropriate</p>
3. Identify site conditions and restraints	<p>3.1. Site safety hazards are recognised and corrective action taken to reduce injury to self and others</p> <p>3.2. Any on-site difficulties are identified and addressed in accordance with regulations and enterprise agreements</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Special characteristics of the glass aperture are identified in relation to the effect of the glass fitting process on the finished job</p> <p>3.4. Covering material is applied where necessary to protect existing fixtures and fittings</p>
4. Fit glass	<p>4.1. Glass is fixed to the frame or opening using the selected method and in accordance with recognised Australian and industry standards</p> <p>4.2. Solvents and sealants are used in accordance with manufacturer recommendations and Australian Standards</p> <p>4.3. Excess sealing material is removed</p> <p>4.4. Glass and/or frame are cleaned after fixing</p>
5. Inspect final product and clean up work area	<p>5.1. Completed installation is checked to ensure compliance with customer requirements, specifications and Australian Standards</p> <p>5.2. Workplace documentation is completed in accordance with workplace requirements</p> <p>5.3. Work area is cleaned and left in a safe condition and rubbish removed from work area and disposed of in accordance with relevant statutory requirements and enterprise requirements</p> <p>5.4. Tools, equipment and materials are cleaned and stored following workplace procedures</p> <p>5.5. Waste and scrap material is removed for disposal or recycling as required</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the workplace technology related to the preparation and installation of structural glazing

Required knowledge

- the types, qualities and characteristics of glass, including the hazards and handling requirements
- the techniques, methods, materials and process of preparing and installing structural glazing
- relevant Australian Standards
- workflow in relation to the preparation and installation of structural glazing
- the application and operation of tools and equipment used
- identification of equipment, processes and procedures
- workplace safety system requirements related to the preparation and installation of structural glazing

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and locate and apply relevant information to fabricate and install structural glazing
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- To complete a minimum of:
 - measure glass for curtain walls, balustrades, suspended and overhead glazing
 - select glass to comply with AS1288
 - cut and process glass in accordance with AS4667
 - identify and erect appropriate ladders and scaffolding to comply with the relevant regulations and standards
 - identification and application of glazing, structural sealants and tapes
 - install glazing materials and weatherproofing
 - calculate the cost of glass and labour
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Frames, glass, fixing material, sealants, workplace operating procedures and work orders, personal protective equipment and an appropriate work area/site.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

EVIDENCE GUIDE	
	Assessment may be in conjunction with assessment of other relevant units of competency.
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant fabrication and installation equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the planning and fitting of glass in structural and other architectural engineered applications • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures
<p>Tools and equipment may include:</p>	<ul style="list-style-type: none"> • general cutting and glazing tools • electric and pneumatic portable power tools • saws • drills and portable compressors
<p>Materials are to include but are not limited to:</p>	<ul style="list-style-type: none"> • all forms of flat glass and acrylic glazing products • plastic • aluminium • steel • solid timber • gaskets • sealants and adhesives
<p>Types of glass may include but are not limited to:</p>	<ul style="list-style-type: none"> • annealed glass • toughened glass • laminated glass • wired glass • bandit resistant glass • bullet resistant glass • heat reflective glass • solar controlled glass and spandral panels

RANGE STATEMENT	
Methods of glazing may include:	<ul style="list-style-type: none"> • beaded • pocket • flush • channel glazing and structural glazing
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • gauntlets • gloves • safety glasses • hard hats • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to fitting of glass for structural applications • On-site procedures and regulations relating to the handling and movement of glass • Equipment manufacturers' specifications and operational procedures • Work instructions including job sheets, plans, drawings and designs • Safety standards include personal protective equipment, OHS regulations and enterprise requirements • Australian Standards: <ul style="list-style-type: none"> • AS1288 Glass in buildings, selection and installation • AS2088 Safety glazing materials in buildings • AS4667 Quality requirements for cut to size and processed glass • AS4285 Skylights • AS4666 Insulating glass units

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGG3019B Conduct commercial and structural glazing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to replace glass in commercial, structural and/or architectural engineered applications.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1. Work requirements in the form of type of glass, frames and the method of fixing are identified from work instructions</p> <p>1.2. Workplace health and safety requirements for fabrication and installation of commercial glazing, including personal protection needs, are identified and observed throughout the work</p> <p>1.3. The process for fabricating and installing commercial glazing is identified</p>
2. Prepare for work	<p>2.1. Work sequence is planned in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials, other than glass and frames, are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Type of glass to be fitted and frames are selected to match:</p> <p>2.3.1. customer order</p> <p>2.3.2. existing glass type</p> <p>2.3.3. requirements for security, noise or light control</p> <p>2.3.4. relevant Australian Standards</p> <p>2.4. Glass fixing method is selected according to:</p> <p>2.4.1. specification</p> <p>2.4.2. type of glass and frame</p> <p>2.4.3. security requirements</p> <p>2.4.4. sealing methods</p> <p>2.4.5. Australian Standards</p> <p>2.5. Glass is checked for type, size and imperfections</p>
3. Identify site conditions and restraints	<p>3.1. Site safety hazards are recognised and corrective action taken to reduce injury to self and others</p> <p>3.2. Other on-site difficulties are recognised and action taken to resolve in accordance with regulations and enterprise requirements</p> <p>3.3. Covering material is applied where necessary to protect existing fixtures and fittings</p> <p>3.4. Special characteristics of the window or door which may affect the finished job are identified and corrective action taken</p>

ELEMENT	PERFORMANCE CRITERIA
4. Prepare frame and materials	<p>4.1. Frame condition (if applicable) is assessed to ensure suitability for glazing in accordance with customer requirements and Australian Standards</p> <p>4.2. Defective frames are reported for repair or replacement in accordance with workplace procedures</p> <p>4.3. Frame is prepared (if required) to receive glass by:</p> <ul style="list-style-type: none"> 4.3.1. removing any remains of glass and sealants 4.3.2. cleaning 4.3.3. surface preparation (if required) 4.3.4. checking size against specification <p>4.4. Fixing and sealing materials are prepared by mixing or cutting to length as appropriate</p>
5. Fit glass	<p>5.1. Glass is fixed to the frame using the selected method and in accordance with recognised industry procedures and Australian Standards</p> <p>5.2. Solvents and sealants are used in accordance with manufacturers' recommendations and Australian Standards</p> <p>5.3. Excess sealing material is removed</p> <p>5.4. Glass and frame are cleaned after fixing</p>
6. Complete work	<p>6.1. Completed installation is checked to ensure compliance with customer requirements, specifications and Australian Standards</p> <p>6.2. Workplace documentation is completed in accordance with workplace requirements</p> <p>6.3. Work area is cleaned and left in a safe condition and rubbish removed from work area and disposed of in accordance with relevant statutory requirements and workplace requirements</p> <p>6.4. Tools, equipment and materials are cleaned and stored following workplace procedures</p> <p>6.5. Waste and scrap material is removed for disposal or recycling as required</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise glass sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the workplace technology related to commercial and structural reglazing

Required knowledge

- the types, qualities and characteristics of glass, including the hazards and handling requirements
- relevant Australian Standards
- the techniques, methods, materials and process of commercial and structural reglazing
- workflow in relation to fitting glass
- the application and operation of tools and equipment used
- identification of equipment, processes and procedures
- workplace safety system requirements related to commercial and structural reglazing

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order/job instruction and locate and apply relevant information to conduct commercial and structural reglazing
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to glass, frames, equipment and products
 - maintain required production output and product quality
- To complete a minimum of:
 - safely remove broken glass from commercial and architectural frames
 - prepare frame and opening including cleanup and/or frame repair
 - measure glass for commercial windows, doors, show and food cabinets including sliding tracks, shop fronts and returns, architectural, curtain wall, structural and overhead glazing
 - select glass to comply with AS1288
 - cut and process glass in accordance with AS4667
 - identify and work with ladders and scaffolding to the relevant regulations and standards
 - identify and apply glazing, structural sealants and tapes
 - install and weatherproof glazing materials
 - calculate the cost of glass and labour
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Frames, glass, fixing material, sealants, workplace operating procedures and work orders, personal protective equipment and an appropriate work area/site.

EVIDENCE GUIDE	
Method of assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment may be in conjunction with assessment of other relevant units of competency.</p>
Context of assessment	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the handling and installation of glass products
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- OHS requirements may include legislation, standards, building codes, material safety management systems and local safe operating procedures

Commercial and structural reglazing

- Commercial and structural reglazing covers work involving the on-site replacement of glass for commercial, structural and other architectural engineered applications. It includes:
 - commercial windows and doors, including: casement, sash, awning and double hung windows, shopfronts and returns, louvres, hinged, pivot and sliding doors and windows, automatic doors, mirrors, furniture applications, showcases, sliding tracks and food cabinets
 - curtain walls, balustrading, structural and suspended glazing and overhead glazing
- It may also include:
 - toughened glass assemblies
 - aluminium glazing systems, including planar assemblies, curtain wall systems, spider assemblies, panel wall systems (hung and stacked)
 - Armour-view balustrading
 - watertight glazing techniques, including

RANGE STATEMENT	
	knowledge of silicone
Tools and equipment may include:	<ul style="list-style-type: none"> • glass cutters • pliers • hack-out knives • drills • putty knives • tape measures • scaffolding • ladders
Materials may include but are not limited to:	<ul style="list-style-type: none"> • all forms of flat glass and acrylic glazing products • plastic • aluminium • steel • solid timber • gaskets • sealants and adhesives
Types of glass may include but are not limited to:	<ul style="list-style-type: none"> • annealed glass • toughened glass • laminated glass • wired glass • bandit resistant glass • bullet resistant glass • heat reflective glass • sputter coated and spandral glass
Methods of glazing may include:	<ul style="list-style-type: none"> • pocket • flush • channel glazing • structural and double glazing
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • gauntlets • gloves • safety glasses • hard hats • safety footwear • aprons and overalls

RANGE STATEMENT	
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures and regulations relating to handling, movement and fitting of glass for commercial and structural applications • Quality and Australian Standards and procedures • Equipment and material manufacturer specifications and operational procedures • Work instructions including job sheets, cutting lists, plans, patterns, templates, drawings and/or designs • Safety standards include personal protective equipment, OHS regulations and enterprise requirements • Australian Standards: <ul style="list-style-type: none"> • AS1288 Glass in buildings, selection and installation • AS2208 Safety glazing materials in buildings • AS4667 Quality requirements for cut to size and processed glass

Unit Sector(s)

Unit sector	Glass and Glazing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGN2002B Move and store materials and products

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to move, store and to record raw materials, goods and finished products.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify products to be stored and appropriate stock records/inventory systems	1.1. Materials, goods and products to be stored are identified 1.2. Potential uses, frequency of use of the materials or frequency of dispatch to other work sections or customers are identified 1.3. Size, shape and special storage requirements are determined 1.4. Requirements for safe storage are identified and forwarded to appropriate personnel 1.5. Stock/inventory systems records are maintained 1.6. Relevant product information, including instructions, care labels and product identification information, are located 1.7. When required reorder documentation is forwarded to appropriate personnel
2. Establish storage areas	2.1. Storage areas selected meet requirements for storing product type and quantity 2.2. Appropriate workplace clearances for use of storage areas are obtained 2.3. Storage areas are cleared of waste and contaminants and any required safety equipment is installed 2.4. Storage areas are planned to safely and effectively store goods based on frequency of use, safe height, weight and size 2.5. Storage arrangements take into account potential damage to raw materials or finished products from: <ul style="list-style-type: none"> 2.5.1. other stored items 2.5.2. handling 2.5.3. rearranging 2.5.4. crushing/scratching/contamination 2.6. Access and working space for safe use by appropriate manual handling equipment, forklifts or safe lifting by personnel is ensured
3. Move materials	3.1. Movement activities are completed as an individual or working directly with others as required by the work tasks 3.2. Roles and related responsibilities for the successful completion of the safe lifting activity are identified and applied 3.3. Materials handling equipment appropriate to the task is

ELEMENT	PERFORMANCE CRITERIA
	<p>selected and used in accordance with regulatory and/or site requirements</p> <p>3.4. Feedback from others is constructively accepted and acted on to continuously improve team and work performance</p>
4. Store materials, goods and products	<p>4.1. Condition of materials, goods and products is observed on arrival and any product below specification is returned to appropriate work areas</p> <p>4.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>4.3. Materials, goods and products are stored observing any requirements for separation of particular types of hazardous or incompatible materials, goods or products</p> <p>4.4. Materials are stacked appropriately for weight loading, size and crushability of goods or products</p> <p>4.5. Products are located to enable access to frequently required items</p> <p>4.6. Work is undertaken in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to the movement and storage of materials and products, work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the storage site to avoid any back tracking or work flow interruptions
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, estimate storage requirements and material requirements
- use checking and inspection techniques to anticipate movement and storage problems, avoid reworking and avoid wastage
- use the limited workplace technology related to movement and storage including inventory systems, tools, equipment and measuring and recording devices

Required knowledge

- workflow in relation to use of goods and materials in store
- potential hazards including fire and explosion risk, security issues and operator safety around products to be stored
- appropriate controls and safety equipment to manage risk
- requirements for minimising damage to and maintaining contaminant-free unfinished materials goods and completed products
- requirements of working with others in a team

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Locate, interpret and apply information relevant to the requirements of the goods to be moved or stored
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Plan layout of storage areas
- Interpret regulations and workplace order requirements
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Establish and maintain storage areas for:
 - raw materials
 - production outputs
- Use a range of non-regulated materials handling devices
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Storage area, manual materials handling equipment, products/materials for storage.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment,

EVIDENCE GUIDE

materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit context	<ul style="list-style-type: none"> OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and local safe operating procedures Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
Materials	Materials may include perishable and non-perishable inventory required to support production operations
Materials handling equipment	Materials handling equipment covered by this unit is restricted to non-regulated machines and appliances
Products may include:	<ul style="list-style-type: none"> furniture furnishing items components and other outcomes (outputs of the local production processes)
Tools and equipment may include but are not limited to:	<ul style="list-style-type: none"> pre-fabricated and fixed shelving open and enclosed pallets shipping containers non-motorised lifting and movement aids
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> Workplace procedures relating to the use of tools and equipment Work instructions, including job sheets, cutting lists, plans, drawings and designs Workplace procedures relating to reporting and communication

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Generic
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGN3001B Read and interpret work documents

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to interpret work documents including cutting lists, standards, drawings and specifications to produce or repair furnishings and to install floor coverings, glass and other furnishing items.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify document type and purpose	1.1. Key information is identified, such as title, version, scale, legend and keys 1.2. Any relevant explanatory or additional information needed to interpret the document is located Clarification is sought to confirm the intention of information
2. Read and interpret the document	2.1. Information such as symbols, abbreviations, acronyms and technical terms are identified and interpreted in terms of: <ul style="list-style-type: none"> 2.1.1. the work to be completed 2.1.2. any Australian Standards requirements 2.1.3. the equipment and tools to be used 2.1.4. the items to be produced or repaired 2.2. Document information is compared to component or supplier advice for use of the materials and, where relevant, Australian Standards 2.3. Design and style features shown in drawings are identified by industry recognised terms
3. Plan own work sequence	3.1. Work sequence, required tools and equipment and tasks to be performed are identified from the documents 3.2. Work sequence is planned, identifying stages where checks against specifications must be made 3.3. Specifications noted in the work plan are checked for accuracy against the drawings and specifications, and any errors are rectified
4. Maintain document files	4.1. Plans and documents are handled carefully and maintained intact 4.2. Any explanatory documentation, additional information and/or modification information is kept with the work plan and original documentation according to workplace procedures 4.3. All documentation is replaced in workplace filing or storage system for retrieval by others as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to the range of work documents relevant to the sector
- communicate ideas and information to enable confirmation of work requirements and specifications
- plan and organise activities to avoid any back tracking, work flow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise information management
- use mathematical ideas and techniques to correctly interpret the content of work documents
- identify alternative methods of accessing and sources of work information
- use workplace technology related to work documentation, its access and storage

Required knowledge

- different types of work documents used in the furnishing industry, and their function
- conventions and symbols of plans, drawings and specifications
- workplace procedures for maintenance of documentation

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Recognise and explain the meanings of symbols, technical terms and conventions of specifications and plans
- Check accuracy of copied specifications
- Maintain condition of documentation
- Locate, read and interpret a minimum of 10 selected/specified work documents which must include:
 - Australian Standards relevant to the sector
 - manufacturer technical instructions and specifications
 - real or simulated local work documents including:
 - work plans
 - material safety data sheets
 - relevant building codes
 - job procedures
 - safe work instructions or equivalent
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource Implications

Access to a range of drawings, standards, plans, specifications and cutting lists relevant to the work.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and generally be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the reading of work documents and the preparation of work plans
- Competency may be determined in workplaces involved in the manufacture and or installation of musical instruments, domestic furniture, commercial furniture, kitchen and bathroom cabinets, furniture components, picture frames, soft furnishings, floor covering and finishing, and glass and glazing

Work documents to be considered are to include but may not be limited to:

- standards
 - drawings
 - cutting lists
 - job specifications and architect/builder plans or equivalent and manufacturer specifications and/or operating instructions
- Work documents are to include hard copy and may include computerised versions

Information and procedures

- Workplace plans, drawings and specifications applicable to all sectors of the industry
- Australian Standards applicable to the industry sectors
- Workplace procedures relating to the preparation of own work plans and the

RANGE STATEMENT	
	maintenance of work documentation <ul style="list-style-type: none"> • Supplier and manufacturer technical data and information • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Generic
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFGN3002B Estimate and cost job

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to estimate materials, labour and time requirements and establish costs for provision of services or products.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Gather information	1.1.Details of customer requirements are obtained through discussion with customer or from information supplied 1.2.Details of products and/or services to be provided are developed 1.3.Delivery point and methods of transportation are determined where necessary 1.4.Details are recorded in accordance with enterprise practice
2. Estimate materials, time and labour	2.1.Types and quantities of materials required for product manufacture are estimated 2.2.Labour requirements to achieve product manufacture and perform required services are estimated 2.3.Time requirements to manufacture and/or install item and perform required services are estimated
3. Calculate costs	3.1.Total materials, labour and overhead costs are calculated in accordance with enterprise procedures 3.2.Total job cost is calculated, including overheads and mark-up percentages 3.3.Final cost to customer is calculated
4. Document details and verify where necessary	4.1.Details of costs and charges are documented in accordance with enterprise practice 4.2.Costs, calculations or other details are verified in accordance with enterprise practice 4.3.Customer quotation is prepared 4.4.Details are documented for future reference in accordance with enterprise practice

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, costs and government charges
- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of work outcomes and problems
- complete an outline plan of activities, including the preparation and layout of the worksite, the obtaining of equipment and materials, and the avoidance of back tracking, work flow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use mathematical ideas and techniques to correctly complete measurements, estimate material, labour and overhead requirements and accurately cost the product/service
- use checking techniques to anticipate and overcome costing problems
- use workplace technology related to the estimation and validation of job costs

Required knowledge

- range of products and services offered by the enterprise
- enterprise or equivalent costing procedures
- components of overheads costs
- components of labour costs
- labour rates and approximate costs of products and materials
- basic mathematical processes

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Interpret specifications and instructions for products and materials to be used
- Interpret work orders
- Document and communicate work-related information including:
 - customer requirements
 - products, materials and labour required
 - costing calculations for products, materials and labour
 - special conditions
- Use of calculators, computer programs and other aids in the estimation and cost calculation processes
- Estimate and cost three varied jobs including:
 - estimate quantities of material required
 - determine the types and amount of labour required to complete the work
 - estimate time required to complete the work
 - estimate overheads associated with the job

Resource Implications

Access is required to real or appropriately simulated situations involving estimation and costing of products and services.

Access is required to specifications and costs of relevant of products, equipment and materials and information on labour costs and availability, safety procedures, regulations, quality standards, and enterprise procedures.

Access is required to all necessary facilities and associated equipment including calculators, computers and relevant software.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of

EVIDENCE GUIDE	
	competency.
Context of Assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process, equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- The estimation and job costing covered here is to be that undertaken by a tradesperson in relation to a sector product for a single client or customer
- The client or customer may be external or internal
- Estimation and costing is to include overheads, labour and materials

Unit context

- OHS requirements include legislation, building codes, material safety management systems, hazardous substances and dangerous goods codes and local safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements

Workplace context

- Work organisation procedures and practices relating to the provision of information and preparation of quotations
- Reporting actions which may include: verbal and written communication in accordance with enterprise policies and procedures
- Oral, written or visual communication including: completion of standard forms, interpretation of information and instructions associated with workplace activities, and recording and reporting of work outcomes
- Use of calculators and/or computers running appropriate software for estimating and calculating necessary details

Information and procedures

- Enterprise work orders and instructions
- Industry codes and symbols
- Product designs, patterns and prototypes
- Building/architectural plans

RANGE STATEMENT

	<ul style="list-style-type: none"> • Australian, international and enterprise quality standards and procedures • Work scheduling documentation • Job procedures
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Unit Sector(s)

Unit sector	Generic
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID1001A Plan the decoration of a simple space

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to plan the decoration of a simple space, selecting the theme, colours, layout and furnishings.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to plan the decoration of a simple space which will result in the visual representation of theme, colours, layout and furnishings such as through drawings or colour boards.</p> <p>The unit is suitable for project related work as part of a VET in Schools program.</p> <p>This unit requires the application of employability skills associated with communication and problem solving to develop storyboards, sketches and design concepts, explore decoration concepts with supervisors and document and interpret decoration requirements. Initiative and enterprise and planning and organising skills are required to design space. This unit requires learning skills in order to experiment with and develop decoration skills.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify the decoration requirements	1.1. Applicable OHS requirements relevant to decorating a simple space are verified and complied with 1.2. Project brief is reviewed and clarified with supervisor to identify decoration requirements 1.3. Resources are selected appropriate to work requirements and checked for operational effectiveness 1.4. Communication requirements for decoration project are identified
2. Plan the space decoration	2.1. Space dimensions and locations of features are measured and recorded 2.2. Sketches and drawings are prepared to illustrate the space 2.3. Plan layout is prepared 2.4. Theme is selected and alternative options provided 2.5. Colours are selected and confirmed 2.6. Supplies necessary to complete the project are selected 2.7. Materials and processes are selected 2.8. Furnishings and other accessories are selected and placement coordinated 2.9. Costing and timeline estimates are compiled and developed into a full project proposal 2.10. Decoration proposal is considered for its environmental qualities
3. Present decoration proposal	3.1. Colour board presentation is made 3.2. Drawings are completed to show layout of decorative components 3.3. Presentation of the design and decoration plan is made

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collecting, organising and understanding information related to work orders, basic plans and safety procedures
- communicating ideas and information and the reporting of work outcomes and problems
- accurately recording and maintaining information relating to interior decoration and design functions
- recognising and responding to circumstances outside instructions or personal competence
- exploring ideas
- applying design principles
- using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- clarifying and confirming work instructions
- planning own work within the given task parameters
- learning of thinking, problem solving and conceptual techniques
- using technology related to the use of tools including calculators, measuring and recording devices

Required knowledge

- elements and principles of design
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- problem identification and resolution techniques

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively plan the decoration of a simple space in the designated timeframe • Effectively apply design elements and principles to decorate a simple space • Comply with established safe practices and procedures for decorating a simple space • Communicate decoration ideas effectively
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to designing and decorating a small space • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Project brief	<ul style="list-style-type: none"> may include but not be limited to the aims, objectives, any design requirements, image requirements and function, effect or feel trying to be achieved, budget and timelines
Simple space	<ul style="list-style-type: none"> may include but not be limited to a room within a domestic residence such as bedroom, bathroom, kitchen, laundry, living space, multi-purpose room, storage room, study, garage, rumpus room, media room, toilet, pantry, family room, entertainment area, hall and workstation
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language

RANGE STATEMENT	
Sketches and drawings	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand, drafted technical drawings or drawings produced on computer using CAD software packages
Layout	<ul style="list-style-type: none"> may include but not be limited to is to include the plan of how a room will be designed and decorated showing the placement of design elements and decorative features, including plans, section elevations and other projections
Themes	<ul style="list-style-type: none"> may include but not be limited to variations of colour ways, furnishing trends and decoration trends
Supplies	<ul style="list-style-type: none"> may include but not be limited to paints, furnishings, decorations and other internal fit-out products
Materials	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Costing	<ul style="list-style-type: none"> may include but not be limited to the cost of products and materials used during completion of the project, labour and overhead expenses
Timelines	<ul style="list-style-type: none"> may include but not be limited to the agreed project time span set and agreed for the project
Colours	<ul style="list-style-type: none"> may include but not be limited to colour principles, psychology, fundamentals, coordination, perception, contrast, harmony, effects on space, formulas and colour wheels
Colour board presentation	<ul style="list-style-type: none"> may include but not be limited to a presentation on board displaying the colour usage and coordination with surface finishes and textiles used throughout the project
Furnishings	<ul style="list-style-type: none"> may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built in cabinetry or fittings, light fittings, lamps, picture framing, tapware, laundry fittings, bathroom fittings, toilet fittings and kitchen fittings

RANGE STATEMENT	
Environmental qualities may include	<ul style="list-style-type: none"> may include but not be limited to use of sustainable resources, use of lighting, selection of furnishings and materials

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID3002A Source and specify decoration products

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to source, assess suitability of, and specify products used in design and decoration projects.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to source and specify products in a retail or wholesale sales environment according to client and project brief requirements. Skills and knowledge are to be used within the scope of the person's job and authority.</p> <p>This unit requires application of employability skills in communication and teamwork to work with customers to select products that are suitable for customer needs and to complete required workplace documentation. Initiative and enterprise and problem solving skills are used to determine suitability of product options. Planning and organising skills are used to source products and learning must be applied to maintain knowledge of product and finishes available on the market.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess client product need	1.1. Client is engaged and design and decoration needs discussed 1.2. Budget, time, colour and function parameters for decoration product are identified 1.3. Client documentation is completed
2. Source and assess suitability of products	2.1. Products are researched and suitable choices made for potential use 2.2. Performance and characteristics of products are evaluated and recorded 2.3. Use requirements of the product are analysed for appropriateness to the application 2.4. Quality and compliance issues are assessed to ensure the products state manufacturers' specifications for use 2.5. Environmental issues are considered in sourcing and selecting products 2.6. Sustainability of products is assessed in terms of durability and wear 2.7. Manufacturing standards and equipment are reviewed to comply with the chosen materials 2.8. Sources or suppliers of products are found and recorded 2.9. Costs associated with purchasing and obtaining the products are recorded and reported
3. Specify products	3.1. Products are selected according to the style of the space 3.2. Final selection of products and finishes is compiled and verified based on the assessment of suitability 3.3. Presentation of the product and finish information is made to the client

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collecting, organising and understanding information related to work orders, basic plans and safety procedures
- communicating ideas and information
- accurately recording and maintaining information relating to products
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- recognising and responding to circumstances outside instructions or personal competence
- using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- clarifying and confirming work instructions
- planning own work within the given task parameters
- accepting responsibility for given tasks
- setting, monitoring and satisfying personal work goals
- learning of thinking, problem solving and conceptual techniques
- maintaining current knowledge of tools and materials
- maintaining current knowledge of interior decoration and design techniques
- using the workplace technology related to product and finishes specification including calculators, measuring and recording devices, computers

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for sourcing and specifying decoration products
- organisational and site standards, requirements, policies and procedures for sourcing and specifying decoration products
- applicable Australian Standards
- basic understanding in elements and principles of design
- ergonomics, anthropometrics, proxemics and aesthetic values of available product range
- characteristics of materials, products and defects
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• workplace information resources on products |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively source and specify decoration products to provide the client with cost effective options which meet the project brief requirements • Effectively apply design elements and principles to the sourcing and specifying of decoration products • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for sourcing and specifying decoration products • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to sourcing and specifying products and finishes • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and

EVIDENCE GUIDE	
	application
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Products	<ul style="list-style-type: none"> • may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built-in cabinetry or fittings, light fittings, lamps, picture framing, tapware, laundry fittings, bathroom fittings, toilet fittings and kitchen fittings • may also include but not be limited to finishes such as paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures
Research	<ul style="list-style-type: none"> • may include but not be limited to computer internet research, viewing swatches, studying the Pantone Matching System (PMS), journals (directions magazines), design shows, retail and wholesale outlets and trade fairs
Performance and characteristics	<ul style="list-style-type: none"> • may include but not be limited to assessment of products to determine if they meet the requirements of the intended end use application and how well they do it, and the durability and composition of the product
Quality	<ul style="list-style-type: none"> • may include but not be limited to an inspection system for ensuring that pre-determined quality standards are being met, highlighting non-conformances requiring intervention
Compliance	<ul style="list-style-type: none"> • may include but not be limited to ensuring that the product meets with Australian Standards or ISO 9000 series quality standards and state and territory manufacturing specifications (where applicable)
Environmental issues	<ul style="list-style-type: none"> • may include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will effect the area it has been sourced from, similarly what impact will be felt by reducing

RANGE STATEMENT	
	or stopping material from the source
Sustainability	<ul style="list-style-type: none"> may include but not be limited to life of the product, durability, maintenance and repair issues and what protective elements it may possess
Materials	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Sources	<ul style="list-style-type: none"> may include but not be limited to suppliers, wholesalers, retailers, manufacturers and designers
Costs	<ul style="list-style-type: none"> may include but not be limited to the cost of products and materials together with the cost of obtaining them either locally, interstate or overseas
Space	<ul style="list-style-type: none"> may include but not be limited to commercial or domestic spaces, rooms such as bedrooms, bathrooms, kitchens, laundries, living spaces, multi-purpose rooms, storage rooms, studies, offices, garages, rumpus rooms, media rooms, toilets, pantries, entertainment areas, halls and work stations

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID3005A Style a retail display

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to style a display to present and sell concepts and ideas in a retail or wholesale sales environment.
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Application of the Unit

Application of the unit	Styling a retail display applies to a retail or wholesale sales environment. These skills and knowledge are to be used within the scope of the person's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for display	<p>1.1. Applicable OHS, legislative and organisational requirements relevant to styling a retail display are verified and complied with</p> <p>1.2. Project brief is reviewed and confirmed with client to identify display requirements</p> <p>1.3. Parameters for the display are assessed and confirmed</p> <p>1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness</p> <p>1.5. Communication with others is established and maintained</p>
2. Plan and design display	<p>2.1. Market needs are evaluated and a display brief developed that capitalises on current trends</p> <p>2.2. Display dimensions are measured and needs of the display space assessed</p> <p>2.3. Sketches and drawings are prepared to illustrate the display</p> <p>2.4. Plan layout is prepared</p> <p>2.5. Theme is selected and alternative options provided</p> <p>2.6. Supplies, products and finishes necessary to complete the project are sourced and costed</p> <p>2.7. Materials and processes are specified</p> <p>2.8. Costings and timelines are compiled and developed</p>
3. Style display	<p>3.1. Final selection of products and finishes is coordinated</p> <p>3.2. Arrangement is resolved to meet client needs and display brief</p> <p>3.3. Trims and hardware are selected and coordinated with the products or finishes</p> <p>3.4. Graphics and text style for signage are selected and applied</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- sketching and drawing
- collecting, organising and understanding information related to work orders, basic plans and safety procedures
- communicating ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- accurately recording and maintaining information relating to interior decoration and design functions
- working with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- using pre-checking and inspection techniques to ensure the tools and equipment are serviceable and ready to use
- accurately recording and maintaining information relating to the design of products
- recognising and responding to circumstances outside instructions or personal competence
- efficiently and safely contributing to innovative interior decoration and design processes
- initiating new ideas and work techniques
- planning and organising activities including the preparation and layout of own worksite and the obtaining and use of tools, equipment and materials to avoid any backtracking, work flow interruptions or wastage
- using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- clarifying and confirming work instructions
- using the workplace technology related to the use of tools including calculators, measuring and recording devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for styling a retail display
- organisational and site standards, requirements, policies and procedures for styling a retail display
- basic understanding of elements and principles of design
- concepts of ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs

REQUIRED SKILLS AND KNOWLEDGE

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| <ul style="list-style-type: none">• design themes and design development• colour, furnishing and decoration options• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement• environmental protection requirements• established communication channels and protocols• problem identification and resolution techniques |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively style a retail display with the products, finishes, trims and hardware to promote trends and design concepts to potential clients • Effectively apply design elements and principles to style a retail display • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for styling a retail display • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to styling a retail display • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Scope of brief

- may include but not be limited to the aims, objectives, milestones for the project, the point of reference for everyone, elements and principles of design and may include organisational or personal profiles, target

RANGE STATEMENT	
	audience, budget, timeline, consultation requirements, colour requirements, image requirements and function
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Displays	<ul style="list-style-type: none"> may include but not be limited to an effective display of a simulated and designed space to sell and promote ideas, concepts, trends, products and decorations associated with the outlet
Sketches and drawings	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand, drafted technical drawings or drawings produced on computer using CAD software packages. These usually contain project specifications
Layout	<ul style="list-style-type: none"> may include but not be limited to the plan of how a room will be designed and decorated showing the placement of design elements and decorative features
Themes	<ul style="list-style-type: none"> may include but not be limited to variations of colour ways (based on directions media),

RANGE STATEMENT	
	furnishing trends and decoration trends
Supplies	<ul style="list-style-type: none"> may include but not be limited to paints, furnishings, decorations and other internal fit-out products
Products	<ul style="list-style-type: none"> may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built in cabinetry or fittings, light fittings, lamps, picture framing, tapware, laundry fittings, bathroom fittings, toilet fittings and kitchen fittings
Finishes	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures
Material	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Costings	<ul style="list-style-type: none"> may include but not be limited to the cost of products and materials used during completion of the project, labour and overhead expenses
Timelines	<ul style="list-style-type: none"> may include but not be limited to the agreed project time span set and agreed for the project
Trims and hardware	<ul style="list-style-type: none"> may include but not be limited to haberdashery, cabinet hardware such as knobs and handles, light fittings, rugs, tie backs and curtain rods

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Interior decoration and design.
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Co-requisite units

Co-requisite units		

LMFID4001A Research, analyse and apply colour for interior spaces

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to research, analyse and apply colour for interior decoration projects.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for experimentation and application of colour in interior decoration projects in order to achieve desired effects.</p> <p>The unit includes coverage of employability skills in problem solving, planning and organising and initiative and enterprise in order to use and experiment with colour to achieve desired decoration effects. Communication skills are required to interpret the effects of colour on design and communicate colour concepts using design tools such as colour wheels and formulas. Self management and learning skills are used to evaluate and review colour development and selection processes.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess colour requirements for the project	1.1. Project brief is reviewed and clarified with client to identify colour requirements 1.2. Parameters for the colour application are assessed and confirmed 1.3. Resources are selected appropriate to work requirements and checked for operational effectiveness 1.4. Communication with others is established and maintained 1.5. Applicable OHS, legislative and organisational requirements relevant to researching, analysing and applying colours are verified and complied with
2. Research colour schemes for interior decoration	2.1. Colour psychology is researched and analysed in accordance with the needs of the project 2.2. Impact of colours upon an interior space are researched and information compiled 2.3. Additive and subtractive colour mixing is researched for interior decoration applications 2.4. Cultural and historical influences on colour use are examined
3. Explore colour schemes	3.1. Colour wheels are used to mix and match alternative colour schemes in assisting with suitability of colours to a space 3.2. Colour systems and colour combinations are explored for interior design application 3.3. Relationship of colours juxtaposed are assessed for their suitability in the space and proportions 3.4. Effect of light is assessed against the impact of colours being proposed for use in certain spaces 3.5. Coordination and visual perception of colours is assessed in accordance with the project brief 3.6. A range of colour mixing techniques are used to match samples 3.7. Light sources are used to mix and throw coloured light onto a range of coloured surfaces to evaluate and record colour effect perceptions 3.8. Contrast and harmony of colours are ascertained through selection of colours in accordance with the project brief
4. Present colour	4.1. Final selection of colours is compiled and verified

ELEMENT	PERFORMANCE CRITERIA
scheme	based on the research and analysis and presented to the client 4.2. Presentation of the colour information is made to the client and specifications recorded 4.3. A range of <i>rendering media</i> is used to present colour schemes 4.4. Colour application is <i>critiqued</i> to assess the effectiveness of the project brief to meet client needs

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collecting organising and understanding information related to work orders, basic plans and safety procedures
- communicating ideas and information to enable confirmation of work requirements and presentation of colour concepts
- experimenting with, and refining, colour ideas
- researching colour concepts and applications
- recognising and responding to circumstances outside instructions or personal competence
- initiating new ideas and work techniques
- planning and organising activities to meet work requirements
- clarifying and confirming work instructions
- setting, monitoring and satisfying personal work goals
- accepting responsibility for given tasks
- learning of thinking, problem solving and conceptual techniques
- maintaining current knowledge of tools and materials

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for researching, analysing and applying colours
- organisational and site standards, requirements, policies and procedures for researching, analysing and applying colours
- elements and principles of design
- creativity and artistic relevance
- colour systems and theories
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- colours, furnishings and decorations
- psychology of colours
- sketching and drawing
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements

REQUIRED SKILLS AND KNOWLEDGE

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| <ul style="list-style-type: none">• established communication channels and protocols• problem identification and resolution |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively research, analyse and apply colours to provide the client with cost effective options which meet the project brief requirements for a minimum of two projects • Visually present colour schemes to illustrate how ideas meet overall project requirements • Effectively apply design elements and principles to researching, analysing and applying colours • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for researching, analysing and applying colours • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to researching, analysing and applying colours • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Project brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes, effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, product based colour systems such as Munsell or similar, colour matching system such as Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited

RANGE STATEMENT	
	to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Colour psychology	<ul style="list-style-type: none"> may include but not be limited to influences such as strength, boldness, excitement, determination, desire, courage, enthusiasm, cheerfulness, affordability, stimulation, creativity, attention-grabbing, comfort, liveliness, intellect, happiness, energy, durability, reliability, safety, honesty, optimism, harmony, freshness, depth, stability, professionalism, loyalty, reliability, honour, trust, power, nobility, luxury, mystery, royalty, elegance, magic, conservatism, traditionalism, intelligence, seriousness, endurance, relaxing, confident, casual, reassuring, earthy, elegance, sophistication, formality, strength, cleanliness, purity, newness, virginity, peace, innocence and simplicity

RANGE STATEMENT	
Colours	<ul style="list-style-type: none"> • may include but not be limited to colour principles, psychology, fundamentals, coordination, perception, language, tonal, translucent, contrast, harmony, effects on space, formulas and colour wheels • may also include but not be limited to hue, chromaticity, saturation, value, luminance, tints, tones, shades, complimentary, primary, secondary and tertiary colours
Interior space	<ul style="list-style-type: none"> • may include but not be limited to commercial or residential spaces, rooms such as bedrooms, bathrooms, kitchens, laundries, living spaces, multi-purpose rooms, storage rooms, studies, garages, rumpus rooms, media rooms, toilets, pantries, entertainment areas, halls and work stations, offices, cafes, shops and restaurants
Additive and subtractive colour mixing	<ul style="list-style-type: none"> • may include but not be limited to two types of colour mixing. The mixing of lights or differently coloured beams projected onto a screen occurs according to the principle of additive colour mixing. The mixing of pigments or paints according to the principles of subtractive colour mixing
Cultural	<ul style="list-style-type: none"> • may include but not be limited to demography, geography (local, regional, national), religious, climatic, societal, cultural, lifestyle, attitudinal, gratification, honour, living conditions, infrastructure, status and habitude
Historical	<ul style="list-style-type: none"> • may include but not be limited to colour study of early civilisation, Berlin & Kay, Aristotle, Newton, Hippocrates, Leonardo Da Vinci, the Renaissance, Goethe's theory of colours, Chevreul and Bauhaus School
Colour wheel	<ul style="list-style-type: none"> • may include but not be limited to a wheel that is formed by placing the primary and secondary and possibly further colours in order around a circle. Traditionally colours are represented on a wheel of 12 colours: three primary colours, three secondary colour (created by mixing primary colours), and six tertiary colours (created by mixing the primary and secondary colours). Modern day

RANGE STATEMENT	
	and electronic colour wheels have endless possibilities
Effects of light	<ul style="list-style-type: none"> may include but not be limited to naturally occurring light caused by windows, doors, changes in space size, sky lights, artificial light using fluorescent, halogen, or incandescing methods, and reflective light
Contrast	<ul style="list-style-type: none"> may include but not be limited to opposing elements of colour which are suitably different yet work together
Harmony	<ul style="list-style-type: none"> may include but not be limited to colours that work well together, that produce a colour scheme that looks attractive; the colour wheel can be used as a valuable tool for determining harmonious colours
Researching	<ul style="list-style-type: none"> may include but not be limited to computer internet research, viewing swatches, studying the PMS, journals (directions magazines), design shows, retail and wholesale outlets and trade fairs
Trends	<ul style="list-style-type: none"> may include but not be limited to new directions resulting from events that are at times subtle and others significant. Colour trends develop the same way. Colour experts gather information from around the world and study changing events and ideas to produce a comprehensive colour story, in the same way that designers seek unique styles and incorporate current philosophies into their work
Rendering media	<ul style="list-style-type: none"> Dry media - may include but not be limited to pencils, charcoal, pastels and spirit-based markers Wet media - may include but not be limited to ink and water-based paints CAD
Critique	<ul style="list-style-type: none"> may include but not be limited to the process of undertaking a critical analysis of a colour, the process used to decide upon it, and the application methodology and final outcomes

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID4002A Decorate residential interiors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to decorate residential interiors for the solution of interior decoration projects in accordance with project briefs.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to analyse a design brief, conduct research and generate decoration ideas and concepts to create a visual experience in a previously defined interior space. This unit includes skills required to select materials and finishes for surface decoration and to arrange the objects and elements within the space. This unit does not cover skills required to alter established structural aspects of the building or building services.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the design process. Planning and organising and problem skills are required to apply design processes and initiative and enterprise are required to develop to design ideas. Self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse the project brief	1.1. Applicable OHS, legislative and organisational requirements relevant to decorating for residential spaces are verified and complied with 1.2. Project brief is reviewed, confirmed and clarified with client 1.3. Parameters for the project are assessed and confirmed 1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness 1.5. Communication with others is established and maintained 1.6. Problems or underlying factors to be addressed by the project brief are verified
2. Conduct research for the design	2.1. Areas for research are identified 2.2. Impacts of cultural, social and economic influences and trends are identified and analysed 2.3. Ergonomic and anthropometric influences are identified and analysed 2.4. Environmental issues are identified and analysed 2.5. Other relevant information is assessed and used to guide research 2.6. Design influences are prioritised for relevancy to design brief 2.7. Collected information is documented
3. Confirm the design brief	3.1. Design requirements are translated in a manner which is clear and concise 3.2. Factors affecting the outcome of the project are documented 3.3. Criteria for assessing and evaluating design concepts are determined 3.4. Final design brief outlining all the requirements is compiled, produced and refined with the client
4. Generate decoration concepts	4.1. Creative methodologies are used to generate a range of decoration concepts and themes 4.2. Concepts are assessed against the project brief to select most viable solution 4.3. Concept is presented to client using a range of concept presentation methods

ELEMENT	PERFORMANCE CRITERIA
	4.4. Ideas are discussed with client and concept is modified according to feedback
5. Translate concepts into 3D decoration ideas	5.1. The elements and principles of design that are derived from the concept are explored 5.2. A range of 3-D decoration ideas are generated from the concept 5.3. Surface <i>materials</i> , finishes, and <i>colours</i> are explored and assessed for their ability to express the concept 5.4. Furniture, <i>fixtures</i> , <i>fittings</i> and <i>accessories</i> are explored and assessed for their ability to express the concept 5.5. The allocation and arrangement of objects within the space are explored 5.6. 2-D and 3-D sketches are developed to document the 3-D space
6. Revise and refine solution	6.1. Planning is revised and refined, and ergonomics considered 6.2. Regulatory requirements relating to decoration are assessed to determine compliance 6.3. <i>Finishes</i> , fittings, fixtures, furniture, materials, and accessories are selected 6.4. Colour scheme is selected to complement the space and create the required visual experience 6.5. <i>Environmental aspects</i> of decoration solution are examined and areas for improved sustainability are identified and incorporated where possible 6.6. Preliminary <i>drawings</i> are developed
7. Present decoration solution to client	7.1. Final presentation is prepared for the client 7.2. Final presentation is presented to the client with key features and benefits of the solution explained 7.3. Client is engaged to gain feedback on decoration elements
8. Reflect on decoration process	8.1. Client feedback and response is analysed to determine success in achieving client satisfaction 8.2. Own performance in the design process is examined to identify strengths and weaknesses 8.3. Areas for improvement are identified

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- preparing and presenting research information
- collecting, organising and understanding information
- communicating ideas and information
- presenting ideas visually
- accurately recording and maintaining information relating to the project
- working and communicating with others to gain information
- recognising and responding to circumstances outside instructions or personal competence
- efficiently and safely contributing to innovative design process
- planning own work within the given task parameters
- maintaining current knowledge of tools and materials
- maintaining current knowledge of design techniques
- applying principles and elements of design
- communicating decoration concepts
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- drawing using manual and computer based techniques
- sequencing operations
- meeting specifications
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for decorating for residential space
- organisational and site standards, requirements, policies and procedures for decorating for residential space
- Australian Standards and the Building Code of Australia
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- historical design styles and movements
- current ethical issues in society affecting designs

REQUIRED SKILLS AND KNOWLEDGE

- current market segments
- aesthetic aspect of elements and principles in 3-D design
- ergonomic and anthropometric standards
- construction technologies
- techniques for the preparation and presentation of research information
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- design themes and design development
- colours, furnishings and decorations
- sketching and drawing techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively analyse a project brief to determine client requirements • Work through the decoration process collecting the required information • Effectively establish criteria for the intended solutions to meet the requirements of the project brief • Effectively design for at least two interior residential spaces to provide the client with creative solutions that satisfy the project brief • Visually and verbally present decoration solution • Effectively apply design elements and principles in designing for residential space • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for designing for residential space • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to decorating residential interiors • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Project brief

- may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target

RANGE STATEMENT	
	market, budget, timeline, consultation requirements, and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes, effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Areas for research	<ul style="list-style-type: none"> may include but not be limited to similar products and typologies and spaces, materials, social and cultural influences, site analysis, site conditions and functional requirements
Environmental issues	<ul style="list-style-type: none"> may include but not be limited to use of renewable resources, energy efficiency, conservation of resources, recycling, waste, by-products, emissions and environmental consciousness/green design
Other information	<ul style="list-style-type: none"> may include but not limited to industry codes and symbols, Australian and international Standards and regulations, historical literature on design styles and movement, ethical reference material, supplier's material data sheets, ergonomic and anthropometric statistical information, market research documents, photographic reference material, site plans and drawings and information on:

RANGE STATEMENT	
	<ul style="list-style-type: none"> • lifestyle requirements • cultural issues • proxemics • costs • product performance and characteristics • existing conditions
Documentation	<ul style="list-style-type: none"> • may include but not be limited to working notes, hand written records, typed information and reports, diagrams, sketches, tables, matrixes, images and visual essays
Creative methodologies	<ul style="list-style-type: none"> • may include but not be limited to brainstorming, word association, imaging, modelling, lateral thinking and application of a range of media
Concepts	<ul style="list-style-type: none"> • may include but not be limited to ideas generated to respond to the design brief through both ideation drawings or sketching and written explanation
Concept presentation methods	<ul style="list-style-type: none"> • may include but not limited to mood board, concept board, 3-D models, sketches and photos
Materials	<ul style="list-style-type: none"> • may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Colours	<ul style="list-style-type: none"> • may include but not be limited to colour principles, psychology, fundamentals, coordination, perception, contrast, harmony, effects on space, formulas and colour wheels
Fixtures, fittings and accessories	<ul style="list-style-type: none"> • may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built in cabinetry or fittings, light fittings, lamps and picture framing • may also include but not be limited to accessories such as trinkets, ceramics, trays, vases, carvings, baskets, pots, plants, candles, clocks, silverware, mirrors, frames, screens, floral displays, haberdashery, glassware, fireplace items, gifts, hand crafts, water features, photographs, pottery, personal items, statues, book ends, bowls and bottles

RANGE STATEMENT	
Finishes	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures
Environmental aspects	<ul style="list-style-type: none"> may include but not limited to how the use of raw materials effects the ecology and environment and how its continued use will effect the area it has been sourced from, energy consumption in achieving the material, greenhouse gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source
Drawings	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand, drafted technical drawings or drawings produced on computer using CAD software packages. These usually contain project specifications may also include but not be limited to elevations, sections, plans, perspectives

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFID4003A Prepare a materials board for client presentation

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to prepare a materials or sample board for client presentation, for interior decoration and design projects.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in interior decoration and design operations of all sizes. The preparation of a materials board includes visual demonstration of colour, materials, samples, finishes and textiles used in the decoration and design project.</p> <p>This unit requires communication skills in order to interpret and document information relating to design and to express ideas to others. Planning and organising and problem solving skills, with initiative and enterprise are applied in the preparation of a materials board to support communication and presentation. Self management and learning skills are used to gather and apply feedback about design concepts.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify presentation requirements from project brief	1.1. Applicable OHS, legislative and organisational requirements relevant to presenting documentation are verified and complied with 1.2. Project brief is reviewed to determine presentation requirements 1.3. Parameters for the project are confirmed with client 1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness 1.5. Communication with others is established and maintained 1.6. All required information is accessed and interpreted to inform the presentation process
2. Prepare materials board	2.1. Substrate for the materials board is obtained in the selected colour and cut to the desired size 2.2. Fabric swatches are gathered and selected fabrics cut to size 2.3. Paint swatches are proportionally arranged and selected paint samples set aside 2.4. Visual information is gathered and prepared in accordance with the design theme and project brief 2.5. Products, materials and accessories are gathered and selected items prepared 2.6. Material and sample board components are composed and arranged before secure fixing to base board 2.7. Fixtures are labelled or a legend compiled to translate the parts and colours 2.8. Materials board is finalised and alternatives prepared in readiness for presentation 2.9. Sketches and drawings are completed and prepared for positioning of products, materials and accessories
3. Prepare for client presentation	3.1. Presentation methodology is developed and prepared 3.2. Materials board presentation is made to the client, selling the attributes of the design solution 3.3. Presentation of materials board information is supported using multimedia and computer based strategies

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- drawing designs
- making presentations
- sourcing information
- collecting, organising and understanding information related to design requirements
- maintaining accurate records
- communicating ideas and information
- sequencing operations
- carrying out work according to OHS practices
- using pre-checking and inspection techniques to ensure the tools and equipment are serviceable and ready to use
- recognising and responding to circumstances outside instructions or personal competence
- efficiently and safely contributing to innovative interior decoration and design processes
- initiating new ideas and work techniques
- planning and organising activities including the preparation and layout of own worksite and the obtaining and use of tools, equipment and materials to avoid any backtracking, work flow interruptions or wastage
- maintaining current knowledge of tools and materials
- maintaining current knowledge of interior decoration and design techniques

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for preparing a materials board and client presentation
- organisational and site standards, requirements, policies and procedures for preparing a materials board and client presentation
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- design themes and design development
- colour, furnishing and decoration options
- psychology of colours

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• sketching and drawing techniques• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement• environmental protection requirements• established communication channels and protocols• problem identification and resolution |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively prepare a materials board for client presentation to provide the client with cost effective options which meet the project brief requirements • Effectively apply design elements and principles to preparing a materials board for client presentation • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for preparing a materials board for client presentation • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to preparing a colourboard for client presentation • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and

EVIDENCE GUIDE	
	<p>application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Project brief

- may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target

RANGE STATEMENT	
	market, budget, timeline, consultation requirements and colour requirements
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Substrate	<ul style="list-style-type: none"> may include but not be limited to matt board, sponge board, frames, mounts or 3-D relief boards
Colours	<ul style="list-style-type: none"> may include but not be limited to colour principles, psychology, fundamentals, coordination, perception, language, tonal, translucent, contrast, harmony, effects on space, formulas and colour wheels may also include but not be limited to hue, chromaticity, saturation, value, luminance, tints, tones, shades, complimentary, primary, secondary and tertiary colours
Fabric swatches	<ul style="list-style-type: none"> may include but not be limited to small pieces of fabric cut as samples from rolls of fabric or commercial display fabric swatches used for retail purposes
Paint swatches	<ul style="list-style-type: none"> may include but not be limited to painted cards or commercially available paint cards

RANGE STATEMENT	
	(available free in paint and hardware shops)
Visual information	<ul style="list-style-type: none"> may include but not be limited to photographs, magazine clippings, drawings and sketches
Themes	<ul style="list-style-type: none"> may include but not be limited to variations of colour ways (based on directions media), furnishing trends and decoration trends
Materials	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Accessories	<ul style="list-style-type: none"> may include but not be limited to haberdashery, cabinet hardware such as knobs and handles, light fittings, rugs, tie backs and curtain rods
Secure fixing	<ul style="list-style-type: none"> may include but not be limited to spray glue (in booth with extraction fan), double-sided tape, blue tack and Velcro
Sketches and drawings	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand, drafted technical drawings or drawings produced on computer using CAD software packages. These usually contain project specifications
Materials board	<ul style="list-style-type: none"> may include but not be limited to a presentation on board displaying the colour usage and coordination with surface finishes, materials and textiles used throughout the project
Presentation methodology	<ul style="list-style-type: none"> may include but not be limited to a justification of the selections made for the decoration or design proposal, a visual presentation and prepared script to accompany the colour board
Multimedia	<ul style="list-style-type: none"> may include but not be limited to presentation boards, portfolios, photography, overhead projectors, data projectors, video and other forms of multi media
Computer based strategies	<ul style="list-style-type: none"> may include but not be limited to PowerPoint presentations, CAD demonstrations, written presentations and other scenarios utilising different software applications

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID4004A Research and recommend furniture and accessories

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to research and recommend furniture and accessories for various decoration and design solutions to meet client and project brief requirements.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent research and recommendation of furniture and accessories and applies to a design and decoration, retail, consulting or studio environment. These skills and knowledge are to be used within the scope of the person's job and authority.</p> <p>This unit requires employability skills in initiative and enterprise and problem solving in order to direct the research and selection of suitable furnishings. Communication skills are used to access and interpret information using information technologies and complete required documentation. Self management and learning skills are applied in the review of information and arrangements to ensure project needs are met.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Interpret decoration requirements from project brief	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to researching and recommending furniture and accessories are verified and complied with</p> <p>1.2. <i>Project brief</i> is reviewed and clarified with <i>client</i> to determine requirements for furniture and accessories</p> <p>1.3. <i>Parameters</i> for furniture and accessories are assessed and confirmed</p> <p>1.4. <i>Resources</i> are selected appropriate to work requirements and checked for operational effectiveness</p> <p>1.5. <i>Communication</i> with others is established and maintained</p>
2. Research furniture	<p>2.1. <i>Aesthetic</i> and <i>style</i> requirements of the <i>furniture</i> are assessed</p> <p>2.2. Intended application for the furniture is analysed and reviewed</p> <p>2.3. New furniture technologies are researched and reported</p> <p>2.4. <i>Tactile</i> requirements of the furniture in relation to the design are researched</p> <p>2.5. <i>Properties</i> of the <i>materials</i> used in the production of furniture are analysed and evaluated</p> <p>2.6. <i>Manufacturing processes</i> and available expertise for the desired furniture are assessed</p> <p>2.7. Costs and availability of furniture are assessed and compared</p> <p>2.8. <i>Environmental impact</i> of furniture materials used are assessed</p> <p>2.9. <i>Longevity and restorability</i> qualities of furniture are researched</p> <p>2.10. Space is measured for furniture requirements, calculating quantities and requirements</p> <p>2.11. Principles of <i>anthropometrics, ergonomics</i> and spatial relationships are applied</p>
3. Research accessories	<p>3.1. Aesthetic and colour requirements of the <i>accessories</i> are assessed</p> <p>3.2. Intended application for the accessories is analysed and reviewed</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. New accessory technologies are researched and reported</p> <p>3.4. Tactile requirements of the accessories in relation to the design are researched</p> <p>3.5. Properties of the materials used in the production of accessories are analysed and evaluated</p> <p>3.6. Manufacturing processes and available expertise for the desired accessories are assessed</p> <p>3.7. Costs and availability of accessories are assessed and compared</p> <p>3.8. Environmental impact of accessory materials used is assessed</p> <p>3.9. Longevity and restorability qualities of accessories are researched</p> <p>3.10. Space is measured for accessory requirements, calculating quantities and requirements</p> <p>3.11. <i>Sketches and drawings</i> are completed and prepared for positioning of products, materials and accessories</p>
4. Make recommendations to client	<p>4.1. Quantities and <i>qualities</i> of selected furniture and accessories are presented and promoted to the client</p> <p>4.2. <i>Performance and characteristics</i> of selected furniture and accessories are presented and promoted to the client</p> <p>4.3. <i>Costs</i> associated with purchasing and obtaining the furniture and accessories are provided in <i>quote</i> form to the client</p> <p>4.4. Presentation of research information and samples is made, highlighting the findings and rationale for the furniture and accessories chosen</p> <p>4.5. Feedback and follow up is instigated and maintained with the client</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collecting, organising and understanding information related to work briefs, basic plans and safety procedures
- communicating ideas and information
- accurately recording and maintaining information
- using computer operations for internet access and searches
- analysing performance characteristics
- comparing findings
- communicating with suppliers
- maintaining accurate records
- clarifying and checking task-related information
- carry out work according to OHS practices
- recognising and responding to circumstances outside instructions or personal competence
- efficiently and safely contributing to innovative interior decoration and design processes
- using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- maintaining current knowledge of interior decoration and design techniques
- using the workplace technology related to the use of tools including calculators, measuring and recording devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for researching and recommending furniture and accessories
- organisational and site standards, requirements, policies and procedures for researching and recommending furniture and accessories
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- furniture types and styles
- accessory types and styles
- design themes and design development
- colours, furnishings and decorations

REQUIRED SKILLS AND KNOWLEDGE

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|---|
| <ul style="list-style-type: none">• sketching and drawing techniques• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement• environmental protection requirements• established communication channels and protocols• problem identification and resolution |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively research and recommend furniture and accessories to assist with informing the design and decoration process and arrive at a solution which meets client requirements • Effectively apply design elements and principles to the research and recommendation of furniture and accessories • Effectively research and recommend furniture and accessories in accordance with the project brief • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for researching and recommending furniture and accessories • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to researching and recommending furniture • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with

EVIDENCE GUIDE	
	<p>application of underpinning knowledge</p> <ul style="list-style-type: none">• Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Project brief

- may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target

RANGE STATEMENT	
	market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes, effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Aesthetics	<ul style="list-style-type: none"> may include but not be limited to the consideration of appeal to a large number of people; products are pleasing to the eye of many who view it
Styles	<ul style="list-style-type: none"> may include but not be limited to furniture designers and key figures such as Frank Lloyd Wright, Charles Eames and Antonio Gaudi may include but not be limited to schools and movements, such as Bauhaus in Germany, Federal style in the United States, and Art Nouveau in Europe may include but not be limited to periods and styles, such as the neo-classical Adams style, the simple lines of Art Deco, and the asymmetrical style of Rococo may also include but not be limited to decorative details, such as rosettes, foots, hinges, and mouldings

RANGE STATEMENT	
Furniture	<ul style="list-style-type: none"> may include but not be limited to kitchen and bathroom furniture, family rooms, lounges, bedrooms, dining rooms, rumpus rooms, offices, reception areas, hallways, laundries, media rooms and entertainment rooms
Tactile	<ul style="list-style-type: none"> may include but not be that perceived by the sense of touch and producing the effect of three-dimensional depth
Properties	<ul style="list-style-type: none"> may include but not be limited to durability, level of fire retardancy, fibre make up, composition, textile use, material use, finishes, quality, environmental sustainability, ergonomics, flammability, maintenance requirements, wear and tear and construction methods
Materials	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles (wool, cotton, polyester, silk, nylon and blends), fibreglass, foam, cardboard, paper products or any other manipulable substance
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Environmental impact	<ul style="list-style-type: none"> may include but not be limited to how the sourcing and use of materials effects the environment and how its continued use will effect the area the material was sourced from, energy consumption in processing the material, greenhouse gases created, waste levels and resource utilisation. Similarly what impact will be felt by reducing or stopping use of the material
Longevity and restorability	<ul style="list-style-type: none"> may include but not be limited to an analysis of how long the material is expected to maintain its structure and colour, while maintaining quality of aesthetic value and how readily the material can be repaired or replaced

RANGE STATEMENT	
Anthropometrics	<ul style="list-style-type: none"> may include but not be limited to the scientific study of the measurements of the human body
Ergonomics	<ul style="list-style-type: none"> may include but not be limited to the study of the efficiency of persons in their working environment
Accessories	<ul style="list-style-type: none"> may include but not be limited to trinkets, ceramics, trays, vases, carvings, baskets, pots, plants, candles, clocks, silverware, mirrors, frames, screens, floral displays, haberdashery, glassware, fireplace items, gifts, hand crafts, water features, photographs, pottery, personal items, statues, book ends, bowls and bottles
Sketches and drawings	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand, drafted technical drawings or drawings produced on computer using CAD software packages. These usually contain project specifications
Quality	<ul style="list-style-type: none"> may include but not be limited to an inspection system for ensuring that pre-determined quality standards are being met, highlighting non-conformances requiring intervention
Performance and characteristics	<ul style="list-style-type: none"> may include but not be limited to the assessment of products to determine if they meet the requirements of the intended end use application and how well they do it, the durability and composition of the product
Costs	<ul style="list-style-type: none"> may include but not be limited to the cost of products and materials together with the cost of obtaining them either locally, interstate or overseas
Quoting	<ul style="list-style-type: none"> may include but not be limited to a price for a project taking account of the sizes associated with the project, the cost of materials, labour and overheads

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID4005A Research and recommend soft furnishings for interiors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to research and recommend soft furnishings for various decoration and design solutions to meet client and project brief requirements.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent research and recommendation of soft furnishings which include curtains and window fittings, carpets, rugs and textiles used in upholstery, cushions and trimmings, in order to achieve integrated decoration and design solutions to meet a project brief.</p> <p>This unit requires employability skills in initiative and enterprise and problem solving in order to direct the research and selection of suitable soft furnishings. Communication skills are used to access and interpret information using information technologies and complete required documentation. Self management and learning skills are applied in the review of information and arrangements to ensure project needs are met.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess soft furnishing requirements for the project	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to researching and recommending soft furnishings are verified and complied with</p> <p>1.2. <i>Project brief</i> is reviewed to determine desired effects for interior space</p> <p>1.3. <i>Parameters</i> for the project are assessed and confirmed</p> <p>1.4. <i>Resources</i> are selected appropriate to work requirements and checked for operational effectiveness</p> <p>1.5. <i>Communication</i> with others is established and maintained</p>
2. Research materials for soft furnishings	<p>2.1. <i>Aesthetic</i>, visual characteristics and <i>colour</i> requirements of the <i>soft furnishings</i> are assessed</p> <p>2.2. Intended applications for the soft furnishings are analysed and reviewed</p> <p>2.3. New soft furnishing and material technologies are researched and assessed against the project brief</p> <p>2.4. <i>Tactile</i> requirements of the soft furnishings in relation to the design are researched</p> <p>2.5. <i>Properties</i> of the materials used in the production of soft furnishings are analysed and evaluated</p> <p>2.6. <i>Manufacturing processes</i> and available expertise for the <i>materials</i> are assessed</p> <p>2.7. Costs and availability of materials are assessed and compared</p> <p>2.8. <i>Environmental impact</i> and benefits of materials are assessed</p> <p>2.9. <i>Durability, restorability</i> and maintenance care quality of materials are researched and requirements for residential and industrial applications examined</p>
3. Research and recommend decorative treatments for windows and openings	<p>3.1. Range of <i>window treatments</i>, their application and fixing technologies are researched</p> <p>3.2. New technologies in window treatments are researched and relevance for decorative project identified</p> <p>3.3. The features, limitations and environmental impact of window treatments are identified</p> <p>3.4. The types of openings and their requirements are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>identified and a range of possible creative solutions determined</p> <p>3.5. Window or opening is measured and details recorded accurately for a range of window treatments</p> <p>3.6. Fabric requirements are calculated, and manufacturing requirements determined for a range of window treatments taking into consideration <i>pattern repeats</i></p> <p>3.7. Window treatment is selected and specified to meet client requirements and minimise environmental impact</p> <p>3.8. Fixing technology is specified appropriate to selected window treatment</p> <p>3.9. Cost estimates are calculated and assessed against project budget</p>
4. Research and recommend soft floor coverings	<p>4.1. Range of <i>floor coverings</i>, their application and installation requirements are researched</p> <p>4.2. The features, limitations and environmental impact of floor coverings are identified</p> <p>4.3. Floor area is measured and details recorded accurately for flooring solution</p> <p>4.4. Flooring solution is selected and details specified to meet client requirements</p> <p>4.5. <i>Cost</i> estimates are calculated and assessed against project budget</p>
5. Document and present decorative recommendations	<p>5.1. Soft furnishings are selected to achieve parameters of design brief</p> <p>5.2. Specifications are documented for all soft furnishing recommendations</p> <p>5.3. Schedule is presented to support decorative solution</p> <p>5.4. Sample board is created to enhance and support the decorative intention</p> <p>5.5. Feedback and follow up is instigated and maintained with the client</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collecting, organising and understanding information related to work briefs, basic plans and safety procedures
- communicating ideas and information
- accurately recording and maintaining information
- using computer operations for internet access and searches
- analysing performance characteristics
- comparing findings
- communicating with suppliers
- maintaining accurate records
- clarifying and checking task-related information
- carrying out work according to OHS practices
- recognising and responding to circumstances outside instructions or personal competence
- efficiently and safely contributing to innovative interior decoration and design processes
- using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- maintaining current knowledge of interior decoration and design techniques
- using the workplace technology related to the use of tools including calculators, measuring and recording devices

Required knowledge

- organisational and site standards, requirements, policies and procedures for researching and recommending soft furnishings
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- soft material types and textiles
- design themes and design development
- colours, furnishings and decoration options
- sketching and drawing techniques
- procedures for the recording, reporting and maintenance of workplace records and information

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• appropriate mathematical procedures for estimation and measurement• environmental protection requirements• established communication channels and protocols• problem |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively research soft furnishings to assist with informing the decoration process and arrive at a solution which meets client requirements • Effectively apply design elements and principles to the recommendation of soft furnishings to achieve a minimum of two integrated decorative solutions • Correctly calculate quantities and costings required to achieve decorative solution • Visually present decorative ideas • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for researching and recommending soft furnishings
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to researching and recommending soft furnishings • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of

EVIDENCE GUIDE	
	<p>tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none"> • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Project brief

- may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target

RANGE STATEMENT	
	market, budget, timeline, consultation requirements and colour requirements
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes, effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Aesthetics	<ul style="list-style-type: none"> may include but not be limited to the consideration of appeal to a large number of people; products are pleasing to the eye of many who view it
Colours	<ul style="list-style-type: none"> may include but not be limited to colour principles, psychology, fundamentals, coordination, perception, contrast, harmony, effects on space, formulas and colour wheels
Soft furnishings	<ul style="list-style-type: none"> may include but not be limited to window treatments, blinds, awnings, trimmings, bedding treatments, lampshades, carpet, rugs, cushions, upholstery and accessories
Tactile	<ul style="list-style-type: none"> may include but not be limited to that perceived by the sense of touch and producing the effect of three-dimensional depth
Properties	<ul style="list-style-type: none"> may include but not be limited to durability, level of fire retardancy, fibre make up, composition, textile use, quality, environmental sustainability, level of insulation, level of light control and useable width of fabric

RANGE STATEMENT	
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Materials	<ul style="list-style-type: none"> may include but not be limited to fabrics and textiles including sisal, coir, plant based products, natural flooring, wool, cotton, polyester, silk, nylon and blends
Environmental impact	<ul style="list-style-type: none"> may include but not be limited to how the sourcing and use of materials effects the environment and how its continued use will effect the area the material was sourced from, energy consumption in processing the material, greenhouse gases created, waste levels and resource utilisation. Similarly what impact will be felt by reducing or stopping use of the material when applied to window fittings, environmental impact may include but not be limited to the amount of natural light made available from decorative solution in order to reduce requirements for powered light sources
Durability and restorability	<ul style="list-style-type: none"> may include but not be limited to an analysis of how long the material is expected to maintain its structure and colour, while maintaining quality of aesthetic value and how readily the material can be repaired or replaced
Window treatments	<ul style="list-style-type: none"> may include but not be limited to curtains, blinds, awnings
Pattern repeat	<ul style="list-style-type: none"> may include but not be limited to textiles or fabrics with a distinctive print and how often that pattern repeats within the applicable square metreage required for a project so as to meet conformity
Floor coverings	<ul style="list-style-type: none"> may include but not be limited to carpets and rugs
Cost	<ul style="list-style-type: none"> may include but not be limited to the cost of products and materials together with the cost of obtaining them either locally, interstate or

RANGE STATEMENT	
	overseas

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID4006A Research and recommend hard materials and finishes for interiors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to research and recommend hard materials and finishes for various interior decoration and design solutions.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent research and recommendation of hard materials including a range of finishes and applies to a design and decoration retail, consulting or studio environment. These skills and knowledge are to be used within the scope of the person's job and authority.</p> <p>This unit requires employability skills in initiative and enterprise and problem solving in order to direct the research and selection of suitable hard materials. Communication skills are used to access and interpret information using information technologies and complete required documentation. Self management and learning skills are applied in the review of information and arrangements to ensure project needs are met.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hard material requirements for project	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to researching and recommending <i>hard materials</i> are verified and complied with</p> <p>1.2. <i>Project brief</i> is reviewed to determine desired effects for interior space</p> <p>1.3. <i>Parameters</i> for the project are assessed and confirmed with <i>client</i></p> <p>1.4. <i>Resources</i> are selected appropriate to work requirements and checked for operational effectiveness</p> <p>1.5. <i>Communication</i> with <i>appropriate personnel</i> is established and maintained</p>
2. Identify types and features of hard materials	<p>2.1. Types of hard materials and their suitability to wall, floor, ceiling and stair applications is identified</p> <p>2.2. Types of hard materials and their suitability to window and door applications are identified</p> <p>2.3. Other hard material products and their features and applications are identified</p> <p>2.4. Hard material requirements for application in a residential environment are analysed</p> <p>2.5. Hard material requirements for application in a commercial or industrial environment are analysed</p> <p>2.6. Environmental and sustainability considerations for hard materials are examined</p>
3. Research hard materials	<p>3.1. <i>Aesthetic</i> requirements of the space are assessed</p> <p>3.2. New hard material technologies are researched and reported</p> <p>3.3. <i>Tactile</i> requirements of the hard materials in relation to the design are researched</p> <p>3.4. <i>Application methods</i> and available expertise for the desired effect are assessed</p> <p>3.5. <i>Manufacturing processes</i> and available expertise for the desired material are assessed</p> <p>3.6. Costs of hard materials are assessed and compared</p> <p>3.7. <i>Environmental impact</i> of hard materials are assessed</p> <p>3.8. <i>Longevity and restorability</i> of hard materials are researched</p> <p>3.9. <i>Hazards</i> associated with the use and application of</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>hard materials are researched</p> <p>3.10. Quality of hard materials are assessed</p>
<p>4. Recommend hard materials</p>	<p>4.1. <i>Elements and principles of design</i> are used to examine the appropriateness of hard materials for client brief requirements</p> <p>4.2. Hard materials are selected to meet client brief requirements</p> <p>4.3. Presentation of research information is made, highlighting the findings and rationale for the hard materials chosen</p> <p>4.4. Presentation includes a range of presentation strategies including one or more materials boards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collecting, organising and understanding information related to work briefs, basic plans and safety procedures
- communicating ideas and information
- accurately recording and maintaining information
- using computer operations for internet access and searches
- analysing performance characteristics
- comparing findings
- communicating with suppliers
- maintaining accurate records
- clarifying and checking task-related information
- carrying out work according to OHS practices
- recognising and responding to circumstances outside instructions or personal competence
- efficiently and safely contributing to innovative interior decoration and design processes
- using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- maintaining current knowledge of interior decoration and design techniques
- using the workplace technology related to the use of tools including calculators, measuring and recording devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to researching and recommending hard materials
- organisational and site standards, requirements, policies and procedures for researching and recommending hard materials
- elements and principles of design
- aesthetic values
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- research techniques
- effects of finishes and finishing techniques
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information

REQUIRED SKILLS AND KNOWLEDGE

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| <ul style="list-style-type: none">• appropriate mathematical procedures for estimation and measurement• environmental protection requirements• established communication channels and protocols• problem identification and resolution |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively research and select hard materials to assist with informing the design process and arrive at a solution which meets client requirements • Effectively apply design elements and principles to the research and selection of hard materials • Effectively research and select hard materials in accordance with the concepts and design brief • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for researching and recommending hard materials • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to researching and recommending finishes • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of

EVIDENCE GUIDE	
	<p>tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Hard materials

- may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, traditional finishes, plastic coatings, UV protected coatings, liquid coatings, synthetic coatings, synthetics, paper, glass, vinyls,

RANGE STATEMENT	
	<p>textiles, laminates, plastics, stainless steel, metals, veneers, ceramics and stone based products</p> <ul style="list-style-type: none"> • may also include but not be limited to solid timber (native and imported), manufactured timber products, reconstituted products, composite materials, plastic, metal, alloys, stone based products, glass, fibreglass, foam, synthetics, cardboard, paper products or any other manipulable substance
Project brief	<ul style="list-style-type: none"> • may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline, consultation requirements, colour requirements
Parameters	<ul style="list-style-type: none"> • may include but not be limited to scope of brief, approval to make changes, effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Client	<ul style="list-style-type: none"> • may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Resources	<ul style="list-style-type: none"> • may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> • may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Appropriate personnel	<ul style="list-style-type: none"> • may include but not be limited to trainers, supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Aesthetics	<ul style="list-style-type: none"> may include but not be limited to the consideration of appeal to a large number of people; products are pleasing to the eye of many who view it
Tactile	<ul style="list-style-type: none"> may include but not be limited to that perceived by the sense of touch and producing the effect of three-dimensional depth
Application methods	<ul style="list-style-type: none"> may include but not be limited to spraying, painting, applicators, gluing, vacuum wrapping, rubbing and bonding
Manufacturing processes	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Environmental impact	<ul style="list-style-type: none"> may include but not be limited to how the making and use of finishes and materials effects the environment and how its continued use will effect those around you, energy consumption in applying the material, greenhouse gases created, waste levels and resource utilisation. Similarly what impact will be felt by reducing or stopping use of the finish or materials
Longevity and restorability	<ul style="list-style-type: none"> may include but not be limited to an analysis of how long the finish or material is expected to last, while maintaining quality of aesthetic value and how readily the finish or material can be upgraded, repaired or replaced
Hazards	<ul style="list-style-type: none"> may include but not be limited to toxins and gases released by some finishes, glues and materials which may be harmful to people if not used correctly
Elements of design	<ul style="list-style-type: none"> may include but not be limited to line, shape, form (geometric or organic), texture and colour
Principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, dominant, sub-dominant or subordinate relationship, emphasis, proximity,

RANGE STATEMENT	
	alignment, space, anthropometry, ergonomics, arrangement, aesthetic relations, tension and development methods

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID4007A Identify materials, construction techniques and methods used in building interiors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit deals with the skills and knowledge required to research and document the materials, construction techniques and methods associated with the construction of residential buildings.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in interior decoration businesses of all sizes. The ability to demonstrate knowledge of the materials and methods associated with the construction of residential buildings must be shown.</p> <p>This unit requires employability skills in communication and planning and organising to access and interpret information using a range of information sources. Self management and learning skills are applied in the review of information to ensure building processes are correctly identified.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Demonstrate knowledge of structural components and materials used</p>	<p>1.1. Residential building process is delineated into separate construction stages and expressed chronologically</p> <p>1.2. Trades, construction techniques and materials associated with each stage are summarised</p> <p>1.3. Individual component members are identified and sorted into structural or non-structural categories</p> <p>1.4. Demolition methods for the removal of existing work can be identified</p>
<p>2. Interpret plans and specifications</p>	<p>2.1. Specific components and materials on given building plans are located</p> <p>2.2. Construction methods are explained from a given plan</p> <p>2.3. Specific component details in a given building specification are located and identified</p> <p>2.4. Bill of quantities and other relevant specification documents are interpreted</p> <p>2.5. Prime cost items are located and extracted from a given <i>set of documents</i></p>
<p>3. Specify the materials and methods involved in the refurbishment of wet areas</p>	<p>3.1. Properties of materials used in wet area construction are evaluated</p> <p>3.2. Installations of wet area cabinetry are specified</p>
<p>4. Develop and maintain relevant and current reference material</p>	<p>4.1. Relevant Building Services Authority building licensing requirements applicable to interior decoration projects are complied with</p> <p>4.2. Evidence of contact with industry suppliers to obtain information relevant to building components and equipment used in residential interiors is presented</p> <p>4.3. An index to the portfolio to reflect industry topics and to allow easy access to the information is provided</p> <p>4.4. Future additions of reference material are allowed for and details of the information such as date, source, author and reference to any related information are included</p> <p>4.5. A strategy to ensure that the portfolio remains current and accurate is prepared</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- the ability to analyse given situations, and determine materials used and construction methods and techniques
- presenting findings in a creative and convincing format
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for identifying building materials and methods
- organisational and site standards, requirements, policies and procedures for identifying building materials and methods
- relevant Australian Standards and the Building Code of Australia
- awareness of different forms of construction
- local environmental plans and relevant building authorities
- basic building and architectural terminology
- common structural and non-structural components of a residential building
- geographical implications of a building site/location
- materials and methods involved in the refurbishment of a wet area
- materials and methods involved in the construction and installation of contemporary built-in cabinetry
- equipment involved in the installation of home theatre systems
- climate control devices including fans, heaters and air conditioners
- research techniques
- demolition methods
- trades, construction techniques and materials associated with each stage
- residential building process

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Access and interpret information about building materials and processes • Identify key elements and participants in the building process • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to identifying materials, techniques and methods used in building interiors • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Set of documents	<ul style="list-style-type: none"> • may include but not be limited to drawings, plans, schedules, specifications and bill of quantities

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID4008A Assess interior light and recommend light fittings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to assess natural and artificial light sources of an interior space and make recommendations for light fittings as part of a decorative solution.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent research and recommendation of light fittings and sustainable lighting practices which are part of an integrated decorative solution.</p> <p>This unit requires employability skills in initiative and enterprise and problem solving in order to direct the research and selection of suitable light fittings. Communication skills are used to access and interpret information using information technologies and complete required documentation. Self management and learning skills are applied in the review of information and arrangements to ensure project needs are met</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Interpret lighting requirements from project brief	<p>1.1. Applicable OHS, legislative and organisational requirements relevant to researching and recommending light fittings are verified and complied with</p> <p>1.2. Project brief is reviewed and clarified with client to determine lighting requirements</p> <p>1.3. Parameters for the project are assessed and confirmed</p> <p>1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness</p> <p>1.5. Communication with others is established and maintained</p> <p>1.6. Available budget for lighting is verified</p>
2. Assess natural light sources	<p>2.1. Site analysis is conducted to assess the natural light and ultraviolet penetration</p> <p>2.2. Project brief and building plans are acquired to assess aspect and orientation</p> <p>2.3. Window treatments and placement are examined to analyse their efficiency in controlling light</p> <p>2.4. Selection of colours for walls, ceilings and furnishings, and wall hangings are reviewed in their effect on raising or lowering the affect of light into the space</p> <p>2.5. Characteristics of natural light are researched and reported in accordance with the project brief goals</p> <p>2.6. Methods of light control and light control devices are assessed for their affect on natural light</p>
3. Assess artificial light sources	<p>3.1. Artificial light sources and their properties are assessed for adequacy in achieving desired lighting effects</p> <p>3.2. Environmental impact of artificial lighting devices are researched and assessed and current technologies identified</p> <p>3.3. Location of artificial lights are identified and required changes to location to meet desired effects are determined</p> <p>3.4. Affect of artificial lighting on the colour spectrum is analysed</p> <p>3.5. Technical terms associated with artificial lighting are</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>used to communicate lighting requirements</p> <p>3.6. <i>Special effects</i> that can be achieved using artificial lighting are identified</p> <p>3.7. Industry standards and requirements for artificial lighting are researched and identified</p>
4. Select light fittings	<p>4.1. Research is conducted to determine cost and energy efficient light fittings to meet the requirements of an integrated decoration solution</p> <p>4.2. Required locations of light fittings are identified</p> <p>4.3. Light fittings are selected and specifications documented</p> <p>4.4. <i>Electricity board is assessed</i> to determine potential complications with selected light fittings</p> <p>4.5. Electrician is consulted to confirm costings and installation requirements to implement lighting schedule</p>
5. Draw and present lighting layouts for an interior space	<p>5.1. Lighting layout is documented using industry symbols and conventions</p> <p>5.2. Selection of light fittings are related to layout including furniture, ceiling forms and natural light</p> <p>5.3. Formats for schedules of light fittings are researched</p> <p>5.4. Lighting schedule is completed</p> <p>5.5. Costings are determined and documented</p> <p>5.6. Lighting layout is presented to client</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collecting, organising and understanding information related to work briefs, basic plans and safety procedures
- communicating ideas and information
- accurately recording and maintaining information
- using computer operations for internet access and searches
- analysing performance characteristics
- comparing findings
- communicating with suppliers
- maintaining accurate records
- clarifying and checking task related information
- carrying out work according to OHS practices
- recognising and responding to circumstances outside instructions or personal competence
- efficiently and safely contributing to innovative interior decoration and design processes
- using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- maintaining current knowledge of interior decoration and design techniques
- using the workplace technology related to the use of tools including calculators, measuring and recording devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for assessing interior light and recommending light fittings
- organisational and site standards, requirements, policies and procedures
- Australian Lighting Standards and drawing conventions
- research sources for lighting
- ergonomics, anthropometrics, proxemics and aesthetic values
- natural light characteristics and controls
- design themes and design development
- sketching and drawing techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• problem identification and resolution techniques |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Assess light for its environmental impact and ability to meet decorative requirements • Provide the client with cost effective and efficient lighting solutions • Apply design elements and principles in recommending light fittings • Provide documented lighting layout and schedule • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for assessing light and recommending fittings • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to assessing interior light and recommending light fittings • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of

EVIDENCE GUIDE	
	<p>tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Light fittings	<ul style="list-style-type: none"> may include but not be limited to lamps, ceiling lights, wall lights, spot lights and flood lights
Project brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and

RANGE STATEMENT	
	criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Site analysis	<ul style="list-style-type: none"> may include but not be limited to a visit to the building (home, office or other) to achieve a feel for the intention of the project brief and how natural light may effect it, to assess the level of radiation from the sun into the space and the angles and obstructions caused by other buildings, vegetation or man made objects. It includes recording information and taking photos
Natural light	<ul style="list-style-type: none"> may include but not be limited to light emitted directly by the sun or reflected from it
Ultraviolet	<ul style="list-style-type: none"> may include but not be limited to light that is so blue humans cannot see it. A band of the electromagnetic spectrum between the visible and the X-ray. Photons of ultraviolet light are more energetic than photons of visible light

RANGE STATEMENT	
Aspect and orientation	<ul style="list-style-type: none"> may include but not be limited to the direction in which a building or space is facing, e.g. north, east, south, west, or any variation of this
Window treatments	<ul style="list-style-type: none"> may include but not be limited to blinds, curtains, awnings, shutters, shades or window tinting
Colours	<ul style="list-style-type: none"> may include but not be limited to colour principles, psychology, fundamentals, coordination, perception, contrast, harmony, effects on space, formulas and colour wheels
Wall hangings	<ul style="list-style-type: none"> may include but not be limited to mirrors, paintings, water colours, etchings, framed memorabilia and certificates
Space	<ul style="list-style-type: none"> may include but not be limited to commercial or domestic spaces, rooms such as bedrooms, bathrooms, kitchens, laundries, living spaces, multi-purpose rooms, storage rooms, studies, offices, garages, rumpus rooms, media rooms, toilets, pantries, entertainment areas, halls and work stations
Characteristics	<ul style="list-style-type: none"> may include but not be limited to energy efficiency, glare, reflection, intensity and dynamic (not constant value)
Methods of light control	<ul style="list-style-type: none"> may include but not be limited to window treatments, sails, building extensions, patios, motorised or automated devices
Light control devices	<ul style="list-style-type: none"> may include but not be limited to motorised or automated mechanisms linked to window treatments
Artificial lighting devices	<ul style="list-style-type: none"> may include but not be limited to lamps, ceiling lights, spotlights, dimmers, wall lights, LED, energy efficient globes, incandescent, halogen, fluorescent, discharge lamps
Special effects	<ul style="list-style-type: none"> may include but not be limited to dimming, spotlight, flooding, brightness, creating space, creating focus
Electricity board is assessed	<ul style="list-style-type: none"> may include but not be limited to identification of approximate age of board, number of circuits, safety switches, signs of rewiring

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID4009A Research architectural styles and movements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to research architectural styles and movements and analyse how they influence interior decoration and design projects.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for the implementation of research techniques to access a range of information sources on architectural styles and movements. It also covers the identification of how architecture influences design and decoration outcomes and the documentation of information for use in decoration and design projects.</p> <p>This unit requires employability skills in initiative and enterprise and problem solving in order to direct the research and identify research implications. Communication skills are used to access and interpret information using information technologies and document findings. Self management and learning skills are applied in the location and analysis of new information and the assessment of the value of information sourced.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan research	1.1. Applicable OHS, legislative and organisational requirements relevant to researching architectural styles are verified and complied with 1.2. Relevant research sources of information on architectural styles are located 1.3. Formal and informal research techniques are selected to access the information 1.4. Scope of research is determined
2. Conduct research and document findings	2.1. Research is conducted using a range of research techniques 2.2. Geographical research is conducted to detect influences 2.3. Historical, cultural, economic and environmental influences on architectural styles and movements are examined 2.4. Features of architecture are identified 2.5. Significant trends in decorative art and architecture and the use of materials and techniques are analysed 2.6. The influence and impact of architecture on interior decoration and design and the relationship of the two disciplines is analysed 2.7. Research information is applied to current architectural design trends, philosophy and surrounding buildings 2.8. Information is documented to develop reference materials to inform decoration and design projects 2.9. Research materials and results of the research are organised and compiled into easy to access facilities for further reference
3. Maintain currency with architectural styles and movements	3.1. Research sources and compiled information are regularly checked for usefulness in informing design and decoration projects 3.2. Current cultural, economic and environmental influences on architecture are analysed 3.3. Opportunities to update and expand research of styles and movements are scheduled 3.4. Findings from research are regularly incorporated into design outcomes

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- conducting research
- reading and interpreting information
- maintaining accurate records
- communicating within the workplace
- carrying out work according to OHS practices
- conducting internet searches
- assessing the value of information
- sketching and recording information visually

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for researching architectural styles and movements
- organisational and site standards, requirements, policies and procedures for researching architectural styles
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of research techniques
- characteristics of materials, products and defects
- computer programs
- design themes and design development
- procedures for the recording and documentation of information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively research a range of architectural styles and movements to assist with informing current design practices • Effectively analyse design elements and principles in architecture • Use research techniques • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for researching architectural styles • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to researching architectural styles used in Australia • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and

EVIDENCE GUIDE	
	<p>application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Research sources

- may include but not be limited to scientific texts, historical texts and journals, oral histories, journals, periodicals, images, objects, films, videos, micro fish, internet, technical information, stories, libraries,

RANGE STATEMENT	
	museums, universities and collection catalogues
Information	<ul style="list-style-type: none"> may include but not be limited to philosophy, Australian histories, cultural issues, spiritual issues, religious issues, histories of Australian and imported architectural trends, linguistics, aesthetics, politics, gender and identity issues, land and place, signs and symbols, criticism, new technologies and light
Architectural styles	<ul style="list-style-type: none"> may include but not be limited to Colonial, Georgian, Colonial Regency, Greek Revival, Gothic Revival, Early Victorian, Mid Victorian, Late Victorian, Italianate, Boom Style, Queen Anne, Edwardian, Federation, Californian Bungalow, Old English, Spanish Mission, Early Modern, Waterfall (including Art Deco), L-shape, Triple Front (Cream Brick), 1970s, 1980s (Eclectic), Federation Revival, Environmental and New Modern may also include but not be limited to Bauhaus, Art Nouveau, de Stijl, Art Nouveau Scandinavian, organic deconstructivism, postmodern, hi-tech, minimalism and a range of pre-20th Century styles
Research techniques	<ul style="list-style-type: none"> may include but not be limited to internet searches, interview, discussions, books, journal reviews, films, documentary reviews and on-site visits
Geographical research	<ul style="list-style-type: none"> may include but not be limited to international, national, regional and local influences
Facilities	<ul style="list-style-type: none"> may include but not be limited to files, computer files, indices, databases, charts and diagrams
Documented	<ul style="list-style-type: none"> may include but not be limited to freehand drawings, sketches, ideation drawings, working drawings, computer generated documentation, pictures, illustrations, photos, multimedia presentations, materials or theme boards, specifications and measurements
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive,

RANGE STATEMENT	
	confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Analysis	<ul style="list-style-type: none"> may include but not be limited to comparing, contrasting, reflecting, critiquing, considering merit, discussion and debate

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID4010A Research interior decoration and design influences

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to research significant influences on contemporary and historical interior decoration and design styles.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for the implementation of research techniques to access a range of information sources on historical, 20th Century and contemporary interior decoration and design styles. It also covers the analysis of information to identify how these influences inform current and future decoration and design projects.</p> <p>This unit requires employability skills in initiative and enterprise and problem solving in order to direct the research and analyse research implications. Communication skills are used to access and interpret information using information technologies and document findings. Self management and learning skills are applied in the location and analysis of new information and the assessment of the value of information.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Research and analyse significant influences on interior decoration and design</p>	<p>1.1. Applicable OHS, legislative and organisational requirements relevant to researching interior decoration and design influences are verified and complied with</p> <p>1.2. Relevant research sources of information on interior decoration and design influences are located</p> <p>1.3. Significant historical influences on interior decoration and design are investigated</p> <p>1.4. Effects of influences on interior decoration and design preferences are identified</p> <p>1.5. Current interior decoration trends are researched, to identify influences on their adoption and dissemination</p>
<p>2. Research and analyse historical development of interior decoration</p>	<p>2.1. Research is conducted using a range of research techniques</p> <p>2.2. Significant decorators and designers in interior decoration and design history are identified and their styles and practices analysed</p> <p>2.3. Key developments and trends affecting interior decoration and design are identified and their impact on styles and practices analysed</p> <p>2.4. Changes in decoration and design trends and philosophy are examined and influences on styles and practices analysed</p> <p>2.5. Historical influences on the development of contemporary styles and practices, including architectural, cultural, economic and environmental, are examined</p> <p>2.6. Information is documented to develop reference materials to inform interior decoration and design projects</p> <p>2.7. Research materials and results of the research are organised and compiled into easy to access facilities for further reference</p>
<p>3. Maintain currency with decoration styles and movements</p>	<p>3.1. Research sources and compiled information are regularly checked for usefulness in informing decoration and design projects</p> <p>3.2. Impact of environmental considerations on decoration and design is analysed</p> <p>3.3. Information sources on design predictions and trends are identified and accessed to maintain currency of</p>

ELEMENT	PERFORMANCE CRITERIA
	industry knowledge

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- conducting research and analysing information
- reading and interpreting information
- maintaining accurate records
- communicating within the workplace
- carrying out work according to OHS practices
- conducting internet searches
- assessing the value of information

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for researching decoration and design styles and movements
- organisational and site standards, requirements, policies and procedures for researching decoration and design styles
- types of research techniques
- decoration and design themes and development
- procedures for the recording and documentation of information

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively research design influences to assist with informing current design practices • Identify historical developments of interior decoration and design practices and how they influence current styles and practices • Use research techniques and develop research facilities • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for researching interior decoration and design
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to researching interior decoration and design • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and

EVIDENCE GUIDE	
	<p>application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Significant influences

- may include but not be limited to social, economic, gender and sexuality, demographics, age, politics, aspirations, environment and work

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

RANGE STATEMENT	
Research sources	<ul style="list-style-type: none"> may include but not be limited to scientific texts, historical texts and journals, oral histories, journals, periodicals, images, objects, films, videos, microfiche, internet, technical information, stories, libraries, museums, universities and collection catalogues
Information	<ul style="list-style-type: none"> may include but not be limited to philosophy, histories, cultural issues, spiritual issues, religious issues, histories of Australian and imported design trends, linguistics, aesthetics, politics, gender and identity issues, land and place, signs and symbols, criticism, new technologies and light
Research techniques	<ul style="list-style-type: none"> may include but not be limited to internet searches, interview, discussion, book, journal reviews, film, documentary reviews and onsite visits
Significant decorators and designers	<ul style="list-style-type: none"> may include but not be limited to Florence Broadhurst, Marc Newson, Philippe Starck, Ron Arad and Ettore Sottsass
Documented	<ul style="list-style-type: none"> may include but not be limited to freehand drawings, sketches, ideation drawings, working drawings, computer generated documentation, pictures, illustrations, photos, multimedia presentations, materials or theme boards, specifications and measurements
Facilities	<ul style="list-style-type: none"> may include but not be limited to files, computer files, indices, databases, charts and diagrams
Environmental considerations	<ul style="list-style-type: none"> may include but not be limited to sustainability, use of environmentally friendly materials, energy efficiency and water efficiency

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID4011A Determine occupational health and safety implications of interior effects

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to identify and assess the occupational health and safety (OHS) implications of effects used in interior decoration and design.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for the assessment of interior decoration and design effects, including furniture, hard and soft materials and accessories, to determine potential hazards for a range of customer groups.</p> <p>This unit requires the application of employability skills associated with self management to assess and apply principles of OHS to operations. Communication skills are required to interpret and understand what is required to provide a safe environment. Teamwork skills are required to understand the impact of own decoration and design ideas on the safety of others. This unit also requires the ability to use initiative and enterprise and problem solving strategies to identify and act upon hazards and risks, and learning skills to research OHS information.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify principles of OHS	<p>1.1. <i>Duty of care</i> and <i>responsibilities of individuals and organisations</i> are defined</p> <p>1.2. Concepts of <i>hierarchy of control</i> are identified and related to the workplace</p> <p>1.3. Codes of practice relating to specific workplace risks are identified</p> <p>1.4. Importance of a <i>systematic approach</i> to OHS is understood</p> <p>1.5. Applicable <i>legislative, OHS</i> and <i>organisational requirements</i> relevant to interior decoration and design are identified</p>
2. Assess OHS implications for interior decoration and design	<p>2.1. <i>Hazards associated with materials</i> used in interiors are identified</p> <p>2.2. <i>Hazards associated with effects</i> are identified</p> <p>2.3. Safety measures implemented to control hazards are identified and implications for interior decoration and design evaluated</p> <p>2.4. Information resources on safety aspects of materials, effects and technology used in interior decoration and design are identified and accessed</p> <p>2.5. Furniture and joinery ergonomics are assessed</p>
3. Assess OHS implications for customers	<p>3.1. <i>Range of customers</i> for interior decoration and design are identified and <i>potential hazards for customers</i> determined</p> <p>3.2. Safety measures implemented to control hazards to customers are identified and implications for decoration and design are evaluated</p>
4. Assess risk	<p>4.1. Likelihood of hazards causing harm is considered and determined</p> <p>4.2. Consequence if the event should occur is evaluated and determined</p> <p>4.3. Risk level (likelihood and consequence combined) is considered and determined</p>
5. Apply risk control measures to decoration and design solutions	<p>5.1. Project brief is analysed and potential safety issues identified</p> <p>5.2. Solutions are evaluated for OHS implications</p> <p>5.3. Range of options which may eliminate or minimise risks are identified</p> <p>5.4. Most appropriate treatment for addressing risk is</p>

ELEMENT	PERFORMANCE CRITERIA
	selected and applied to solution

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collecting, organising and understanding information related to work orders, basic plans and safety procedures
- communicating ideas and information to enable confirmation of safety and risk management requirements and specifications, coordination of the required work with site supervisor, other workers and customers, and the reporting of safety outcomes and problems
- working with others and in a team by recognising dependencies and using cooperative approaches to optimise safety management
- using pre-checking and inspection techniques to anticipate possible hazards
- recognising and responding to circumstances outside instructions or personal competence
- planning and organising activities including the preparation and layout of the worksite and the obtaining of treatment equipment and materials to avoid any back tracking, work flow interruptions or wastage
- using mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements for the management of workplace safety
- clarifying and confirming work instructions
- planning work within given task parameters
- accepting responsibility for given tasks
- setting, monitoring and satisfying personal work goals
- satisfying the competency requirements for the job
- maintaining current knowledge of workplace safety standards and instructions
- seeking learning opportunities
- using the workplace technology related to the risk management including tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to risk management in an interior decoration and design environment
- organisational and site standards, requirements, policies and procedures for interior decoration and design
- types of tools and equipment, their operating characteristics and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- common interior decoration and design related hazards and the range of commonly applied treatments

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• environmental protection requirements• established communication channels and protocols• problem identification and resolution• appropriate mathematical procedures for estimation and measurement• procedures for the recording, reporting and maintenance of workplace records and information |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for risk management in an interior decoration and design work environment • Locate and apply safety information • Assess safety aspects of interior decoration and design solutions for a range of customers • Address risks and hazards in interior decoration and design • Complete a minimum of three risk assessments of interior decoration and design solutions including the determination of required treatments • Work effectively with others
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to determining OHS implications of interior effects • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation

EVIDENCE GUIDE	
	<p>of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none"> • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Duty of care	<p>Duty of care requires everything 'reasonably practicable' to be done to protect the health and safety of others at the workplace. This duty is placed on:</p> <ul style="list-style-type: none"> • all employers • their employees • any others who have an influence on the hazards in a workplace
Responsibilities of individuals and organisations	<ul style="list-style-type: none"> • may include but not be limited to complying, as far possible, with all activities carried out in accordance with the standard and reporting anything that might affect compliance with the standard
Hierarchy of control	<ul style="list-style-type: none"> • may include but not be limited to the range of feasible options for managing the risk to health and safety. The hierarchy normally ranges over the following controls: elimination of the hazard; its substitution with a less harmful version; its redesign; engineering controls; isolation of the hazard from people at the workplace; safe work practices; redesigning work systems; and the use of personal protective equipment by people at the workplace
Systematic approach	<ul style="list-style-type: none"> • may include but not be limited to hazard identification, risk assessment, risk control, review
Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant

RANGE STATEMENT	
	industry codes of practice, duty of care and heritage
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination, control of hazardous materials and substances, manual handling including lifting and carrying
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Materials	<ul style="list-style-type: none"> may include but not be limited to adhesives, nails, and staples, paint, treatments and finishes, fixtures, fabrics, animal skin, wood, metal, plastic, foam and oils
Hazards associated with materials	<ul style="list-style-type: none"> may include but not be limited to chemical properties such as toxicity, fumes, combustibility physical properties such as strength, weakness, splintering, breakage, weight components such as adhesives, nails, and staples manual handling requirements
Effects	<ul style="list-style-type: none"> may include but not be limited to furniture, fixtures, finishes, accessories, soft furnishings, lighting and special effects
Hazards associated with effects	<ul style="list-style-type: none"> may include but not be limited to chemical properties such as toxicity, fumes, combustibility physical properties such as strength, weakness, splintering, breakage, weight

RANGE STATEMENT	
	<ul style="list-style-type: none"> • components such as adhesives, nails, and staples • manual handling requirements • location and positioning considerations such as accessibility and obstruction, fixing and securing • placement of power sources and leads • ergonomics
Range of customers	<ul style="list-style-type: none"> • may include but not be limited to aged and the elderly, people with disabilities, children, adults
Potential hazards to customers	<ul style="list-style-type: none"> • may include but not be limited to allergies to materials, injury from materials or components, injury due to design faults, lack of stability, breakages, difficult to handle or install effects and electric shock

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFID5001A Design residential interiors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the knowledge and skills required to apply researched information to formulate creative and complex design solutions to a range of residential interior design situations satisfying the physiological, psychological, social, cultural and environmental requirements of the brief.</p>
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to analyse a design brief, conduct research and use creative methodologies to generate design solutions for residential interiors. Designs covered by this unit include those which require changes to established structural aspects of the building interior or to building services.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the design process. Planning and organising and problem solving skills are required to apply design processes and initiative and enterprise are required to develop design ideas. Self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse the project brief	1.1. Applicable OHS, legislative and organisational requirements relevant to designing for residential spaces are verified and complied with 1.2. Project brief is reviewed, confirmed and clarified with client 1.3. Key requirements for the project are assessed and confirmed and constraints determined 1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness 1.5. Communication with others is established and maintained 1.6. Relevant research is conducted to gain all information which may be used to inform the design process 1.7. All required information is accessed and interpreted to inform the design process
2. Conduct project research	2.1. Site analysis is conducted to assess the requirements of the space requiring work 2.2. Intended function of the space is ascertained from the client 2.3. Contextual information relating to the brief is researched and evaluated 2.4. Functional and planning issues are determined specific to the site and client requirements 2.5. Research material is organised and presented in the form of a design proposal 2.6. Project is planned to make effective use of time and available resources
3. Develop design concepts	3.1. Multiple ideas and concepts are generated in a creative and diverse manner that is sympathetic to the design brief 3.2. Concepts are presented through appropriate presentation methods 3.3. Viability of concepts are assessed in conjunction with others 3.4. Environmental implications of the project are assessed and design concepts reviewed to ensure maximum energy efficiency achieved in solution 3.5. Access issues relating the project are identified and

ELEMENT	PERFORMANCE CRITERIA
	addressed in design solution
4. Design the space	<p>4.1. Ideas are translated into 3-D space satisfying functional criteria</p> <p>4.2. Evidence of 3-D notions are explored through modelling</p> <p>4.3. The arrangement and allocation of space is explored to express the concept</p> <p>4.4. Idea with the greatest potential for success is presented to promote the design's acceptance using both 2-D and 3-D representations.</p> <p>4.5. Client feedback is sought, amendments are agreed to and recorded, and ideas are revised and refined</p> <p>4.6. A colour and materials palette is selected to enhance spatial ideas</p> <p>4.7. Design is modified in response to critical feedback without losing integrity of the design intention</p>
5. Revise and refine solution	<p>5.1. Ergonomic and anthropometric principles are assessed in respect to the space and the intended products</p> <p>5.2. Spatial planning is further revised and resolved in response to client feedback</p> <p>5.3. Materials, colours, furniture, finishes, fixtures and fittings are selected appropriate to the concept and brief parameters</p> <p>5.4. Feedback is received through consultation with the client and incorporated into design solution</p>
6. Prepare a fully rendered client presentation	<p>6.1. Resource requirements are identified for presentation</p> <p>6.2. Final design solution is communicated effectively and creatively using a range of techniques and media</p> <p>6.3. Documentation drawings and material selections are prepared that are consistent with, and that best communicate, the design intent</p> <p>6.4. Work is completed to plan and within brief constraints</p> <p>6.5. Client feedback and response is analysed to determine success in achieving client satisfaction</p> <p>6.6. Own performance in the design process is examined to identify strengths and weaknesses</p> <p>6.7. Areas for improvement are identified</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- applying principles and elements of design
- communicating design concepts
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- drawing using manual and computer based techniques
- sequencing operations
- meeting specifications
- computer aided design techniques
- clarifying and checking taskrelated information
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for designing for residential space
- organisational and site standards, requirements, policies and procedures for designing for residential space
- Australian Standards and the Building Code of Australia relating to interior residential design
- environmental protection requirements relating to interior residential design
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- design themes and design development
- colours, furnishings and decorations
- sketching and drawing to architectural drawing standards
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively design for at least two residential interiors to provide the client with creative solutions that satisfy the design brief • Effectively apply design elements and principles in designing for residential space • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for designing for residential space • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to designing for residential space • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Project brief

- may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, budget,

RANGE STATEMENT	
	<p>timeline, consultation requirements and colour requirements</p>
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Relevant research	<ul style="list-style-type: none"> may include but not be limited to similar products and typologies, materials, social and cultural influences, site analysis, site conditions and functional requirements
Information	<ul style="list-style-type: none"> may include but not be limited to lifestyle requirements, cultural issues, ergonomics, anthropometrics, proxemics, costs, product performance and characteristics, and existing conditions
Site analysis	<ul style="list-style-type: none"> may include but not be limited to a visit to the site to achieve a feel for the intention of the project brief and how services may be affected by it, identifying constraints of site and recording information and taking photos
Creative methodologies	<ul style="list-style-type: none"> may include but not be limited to brainstorming, word association, imaging, modelling, lateral thinking and application of a range of media
Presentation methods	<ul style="list-style-type: none"> may include but not be limited to mood board, concept board, 3-D models, sketches, photos
Environmental implications	<ul style="list-style-type: none"> may include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will

RANGE STATEMENT	
	effect the area it has been sourced from, energy consumption in achieving the material, greenhouse gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source
Materials	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Colours	<ul style="list-style-type: none"> may include but not be limited to colour principles, psychology, fundamentals, coordination, perception, contrast, harmony, effects on space, formulas and colour wheels
Finishes	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures
Fixtures and fittings	<ul style="list-style-type: none"> may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built in cabinetry or fittings, light fittings, lamps and picture framing may also include but not be limited to accessories such as trinkets, ceramics, trays, vases, carvings, baskets, pots, plants, candles, clocks, silverware, mirrors, frames, screens, floral displays, haberdashery, glassware, fireplace items, gifts, hand crafts, water features, photographs, pottery, personal items, statues, book ends, bowls and bottles
Design drawings	<ul style="list-style-type: none"> may include but not be limited to drafted technical drawings or drawings produced on computer using CAD software packages to architectural standards. These contain project specifications may also include but not be limited to elevations, sections, plans and perspectives

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID5002A Develop a decoration proposal for a complex site

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the knowledge and skills required to develop a complete proposal for a complex site that satisfies the requirements of a client brief.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to specify the furniture, fixtures, fittings and artworks for a complex site which may include a high end residential or commercial site with multiple themes and usage areas.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the decoration process. Planning and organising and problem solving skills are required to apply decoration processes and initiative and enterprise are required to develop decoration ideas. Self management and learning skills are applied to assess and reflect on own skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse the project brief	1.1. Applicable OHS, legislative and organisational requirements relevant to designing for complex sites are verified and complied with 1.2. Project brief is reviewed, confirmed and clarified with client 1.3. Key requirements for the project are assessed and confirmed and constraints determined 1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness 1.5. Communication with others involved in the project is established and maintained 1.6. Relevant research is conducted to gain all information which may be used to inform the decoration process 1.7. All required information is accessed and analysed to inform the decoration process
2. Conduct project research	2.1. Site analysis is conducted to assess the requirements and environmental aspects of the spaces requiring work 2.2. Intended function of the spaces are ascertained from the client 2.3. Contextual information relating to the brief is researched and evaluated 2.4. Functional and planning issues are determined specific to the site and client requirements 2.5. Research material is organised and presented in the form of a decoration proposal 2.6. Project is planned to make effective use of time and available resources
3. Generate decorative themes and concepts	3.1. Multiple ideas and concepts are generated in a creative and diverse manner that is sympathetic to the project brief 3.2. Ideas are translated into two and three-dimensional space resolution using a range of techniques and media 3.3. Themes and concepts are presented to the client using support documentation, sketches, mood boards, and concept boards 3.4. Viability of concepts are assessed in conjunction

ELEMENT	PERFORMANCE CRITERIA
	<p>with others</p> <p>3.5. Client feedback is obtained and ideas revised and refined accordingly</p>
<p>4. Select and specify internal finishes, furniture, furnishings, lighting and object d'art</p>	<p>4.1. Internal elements and wall and floor finishes are selected and specified according to brief parameters</p> <p>4.2. Materials board and schedules are developed</p> <p>4.3. Lighting effects are designed and detailed</p> <p>4.4. Furniture, accessories and art objects are selected, specified and costed using established workplace system</p> <p>4.5. Furnishings and window treatments are selected to enhance the design scheme within the constraints of the brief and budget</p> <p>4.6. Rendered 2-D and 3-D drawing of the scheme are prepared to represent the desired effect</p>
<p>5. Present a fully resolved scheme and evaluate client response</p>	<p>5.1. Final decoration solution is presented to the client in a professional manner using a range of digital media</p> <p>5.2. Client feedback is sought, amendments are agreed to and recorded, and ideas are revised and refined without losing design integrity</p> <p>5.3. Own performance in the design process is examined to identify strengths and weaknesses</p> <p>5.4. Areas for improvement are identified</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- applying principles and elements of design
- communicating design concepts
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- drawing using manual and computer based techniques
- sequencing operations
- meeting specifications
- computer aided design techniques
- clarifying and checking taskrelated information
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for decorating high end residential and commercial spaces
- organisational and site standards, requirements, policies and procedures
- Australian Standards and the Building Code of Australia relating to decoration projects
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution techniques
- elements and principles of design
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs used for drawings and preparation of decoration documentation
- design themes and design development
- colours, furnishings and decorations
- sketching and drawing to architectural drawing standards
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively interior design for at least two complex sites to provide the client with creative solutions that satisfy the design brief • Effectively apply design elements and principles in designing for complex sites • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for designing for complex sites • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to developing a decoration proposal for a complex site • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Complex space	<ul style="list-style-type: none"> may include but not be limited to high end residential or commercial site with multiple themes and usage areas
Project brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and

RANGE STATEMENT	
	criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, pantone matching system (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Relevant research	<ul style="list-style-type: none"> may include but not be limited to similar products and typologies, materials, social and cultural influences, site analysis, site conditions and functional requirements
Information	<ul style="list-style-type: none"> may include but not be limited to lifestyle requirements, cultural issues, ergonomics, anthropometrics, proxemics, costs, product performance and characteristics, and existing conditions
Site analysis	<ul style="list-style-type: none"> may include but not be limited to a visit to the site to achieve a feel for the intention of the project brief and how services may be affected by it, identifying constraints of site and recording information and taking photos
Environmental aspects	<ul style="list-style-type: none"> may include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will effect the area it has been sourced from, energy consumption in achieving the material, green house gases created, waste levels, resource utilisation and transport effects.

RANGE STATEMENT	
	similarly what impact will be felt by reducing or stopping material from the source
Design drawings	<ul style="list-style-type: none"> may include but not be limited to drafted technical drawings or drawings produced on computer using CAD software packages to architectural standards. these contain project specifications

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID5003A Evaluate site for interior design brief

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the skills and knowledge required to evaluate materials and construction methods used on a site in order to determine their impact on the interior design brief.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to identify the features and implications associated with common structural techniques used for walls, ceilings and floors and the materials used. It also covers a simple assessment of main services to determine suitability for design requirements.</p> <p>This unit requires employability skills in initiative and enterprise, planning and organising and problem solving in order to evaluate a site systematically and determine implications for design. Communication skills are used to access and interpret information. Self management and learning skills are applied to gain additional information to support evaluation findings.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for site evaluation	1.1. Applicable OHS, legislative and organisational requirements relevant to conducting site visits are verified and complied with 1.2. Scope of brief is reviewed and any available drawings accessed 1.3. Parameters for the project are assessed and confirmed 1.4. Site visit is arranged with client 1.5. Tools used to assist in site evaluation are prepared
2. Assess structural aspects of interior space	2.1. Wall construction and features are identified and suitability to design requirements are determined 2.2. Flooring construction and features are identified and suitability to design requirements are determined 2.3. Roof construction and features are identified and suitability to design requirements are determined 2.4. Other structures and their features are analysed to determine requirements to meet design brief 2.5. Changes required for structural aspects to meet design brief are identified and implications examined 2.6. Measurements are undertaken and recorded to inform budget calculations and design documentation 2.7. Costs associated with making structural changes are estimated
3. Assess materials used in interior space	3.1. Materials used in interior walls are identified and their features, applications and limitations assessed 3.2. Materials used in flooring are identified and their features, applications and limitations assessed 3.3. Finishes and other materials used are assessed and implications for design brief are identified 3.4. Properties of the materials used in structures are analysed and evaluated
4. Assess services	4.1. Plumbing, water and drainage features that may impact on design brief are identified and assessed 4.2. Features of electrical service are assessed to determine suitability for design requirements 4.3. Other services are assessed to determine suitability for design requirements
5. Conduct additional research to support	5.1. Specialist professionals are consulted to verify or further determine outcomes relevant to design

ELEMENT	PERFORMANCE CRITERIA
site evaluation	<p>requirements</p> <p>5.2. Building information, plans, drawings and materials data is accessed to gain additional information relevant to the project</p> <p>5.3. New technologies are researched to determine relevance to project</p> <p>5.4. <i>Longevity and restorability</i> quality of structures and materials are researched</p> <p>5.5. <i>Environmental considerations</i> for project are identified and further information accessed to ensure currency of knowledge</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- measurement
- observation
- researching
- ability to resource information
- accessing and applying the Building Code of Australia
- ability to resource information appropriate to interior construction
- documentation skills/report writing
- mathematical skills for estimating quantities
- ability to establish drawing requirements
- ability to document construction details in a range of scales
- notation of materials, techniques and finishes
- apply safety procedures

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for evaluating a site
- organisational and site standards, requirements, policies and procedures for evaluating a site
- the role of Australian Standards and the Building Code of Australia
- elements and principles of design
- characteristics of materials, products and defects
- procedures for documenting workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution techniques
- basic building and architectural terminology
- common structural and non-structural components of a residential building
- materials and methods involved in interior refurbishment
- local regulations/ councils etc
- construction techniques/ technologies
- statutory planning regulations affecting interior design
- sub-contractors roles

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively assess structural and non structural elements of a site to determine implications for interior design • Identify the features and implications of construction techniques identified in the range of variables • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for assessing a site • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to assessing viability of structures for domestic properties • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Scope of brief

- may include but not be limited to the aims, objectives, milestones for the project, the point of reference for everyone, elements and principles of design, organisational or personal profiles, target audience, budget,

RANGE STATEMENT	
	timeline, consultation requirements, colour requirements, image requirements and function
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Tools	<ul style="list-style-type: none"> may include but not be limited to measuring devices, cameras, colour charts and note taking equipment
Wall construction	<ul style="list-style-type: none"> may include but not be limited to solid masonry, stud frame, load bearing, non-load bearing and bracing
Flooring construction	<ul style="list-style-type: none"> may include but not be limited to concrete slab, timber, steel and under floor access
Roof construction	<ul style="list-style-type: none"> may include but not be limited to rafter and truss construction, sheeted, suspended and underside of floor of level above
Other structures	<ul style="list-style-type: none"> may include but not be limited to beams, lintels and columns
Materials used in interior walls	<ul style="list-style-type: none"> may include but not be limited to timber (softwood, hardwood), concrete block, brick, concrete, aerated concrete, plasterboard, fibrous cement products, manufactured timber products, metals, acrylic sheeting and laminate sheeting
Materials used in flooring	<ul style="list-style-type: none"> may include but not be limited to concrete, timber, manufactured timber products, hard floor finishes (types including ceramic tiles and floating floor systems) and soft floor coverings
Other materials	<ul style="list-style-type: none"> may include but not be limited to building products of all types used for the manufacture of beams, columns, windows, doors, railings and finishing trims, manufactured from solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, fibreglass, foam, cardboard, paper products or any other manipulable substance

RANGE STATEMENT	
Properties	<ul style="list-style-type: none"> may include but not be limited to principles of structural systems, terminology, modification capability, compression, tension, shear, bending, twisting, wind forces, durability, level of fire retardancy, fibre make up, composition, material use, finishes, quality, environmental sustainability, ergonomics, flammability, maintenance requirements, wear and tear and construction methods
Features of electrical service	<ul style="list-style-type: none"> may include but not be limited to approximate age of electrical distribution board, number of circuits, safety switches, circuit breakers, signs of rewiring, position and number of power outlets, position and number of lights, data and communications cabling
Other services	<ul style="list-style-type: none"> may include but not be limited to gas, data, communications, air extraction and conditioning
Specialist professionals	<ul style="list-style-type: none"> may include but not be limited to engineers, plumbers, electricians, communications consultants, licensed builders and architects
Longevity and restorability	<ul style="list-style-type: none"> may include but not be limited to an analysis of how long the material is expected to maintain its structure and colour, while maintaining quality of aesthetic value and how readily the material can be repaired or replaced
Environmental considerations	<ul style="list-style-type: none"> may include but not be limited to design sustainability, how the use of raw materials effects the ecology and environment and how its continued use will effect the area it has been sourced from, energy consumption in achieving the material, green house gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID5004A Specify structural elements, systems and services for interior spaces

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the skills and knowledge required to specify structural elements, systems and services for interior spaces in order to achieve design requirements.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to determine structural elements, systems and services required to implement interior designs. It includes the production of drawings that include layout specifications using computer aided design programs. Structural elements may include walls, flooring and ceiling components, and services may include plumbing, drainage, electrics, gas and air conditioning. Interior designs may relate to residential or small to medium scale commercial spaces and may include new or existing buildings.</p> <p>This unit requires employability skills in initiative and enterprise, planning and organising and problem solving in order to determine design specifications. Communication skills are used to interpret and document design information. Self management and learning skills are applied to gain additional information to support design skills.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		
	<i>LMFID5003A</i>	<i>Evaluate site for interior design brief</i>

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Conduct project evaluation	1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to conducting site visits and preparing design specifications are verified and complied with 1.2. <i>Project brief</i> is reviewed and <i>parameters</i> for the project are assessed and confirmed 1.3. Site measurements and drawings are analysed and information on structures and services confirmed 1.4. Construction methods used are identified and implications for design determined
2. Design <i>structural aspects</i> of design	2.1. Location and features of walls are determined and documented 2.2. Location and features of flooring are determined and documented 2.3. Location and features of ceilings are determined and documented 2.4. Location and features of other structures are determined and documented 2.5. Implications of structural designs are identified and addressed 2.6. Costs associated with making structural changes are calculated 2.7. <i>Environmental considerations</i> and <i>access implications</i> for structural ideas are identified and integrated into the design
3. Design service aspects	3.1. Location and features of plumbing are determined and documented 3.2. Location and features of air conditioning, if applicable, are determined and documented 3.3. Location and features of electricity outlets are determined and documented 3.4. Location and features of other service aspects, if applicable, are determined and documented 3.5. Implications of service designs are identified and addressed 3.6. Costs associated with making service changes are calculated 3.7. Environmental considerations and access implications for service ideas are identified and integrated into the design

ELEMENT	PERFORMANCE CRITERIA
4. Liaise with specialist professionals	4.1. <i>Specialist professionals</i> are sought out and contacted to assess viability of design 4.2. Costs and work requirements are confirmed with specialist professionals 4.3. Work schedule is developed and tested with industry professionals
5. Prepare design documentation	5.1. Design drawings are completed with layout and specifications for structural, non-structural and service information 5.2. Budget and project implementation schedule is developed 5.3. Design documentation is prepared for client 5.4. Design is presented to client and reviewed for further improvement

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- measurement
- observation
- researching
- ability to resource information
- accessing and applying the Building Code of Australia
- ability to resource information appropriate to interior construction
- documentation skills/ report writing
- mathematical skills for estimating quantities
- ability to establish drawing requirements
- ability to document construction details in a range of scales
- notation of materials, techniques and finishes
- apply safety procedures

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for designing structural and service aspects of an interior space
- organisational and site standards, requirements, policies and procedures
- the role of Australian Standards and the Building Code of Australia
- elements and principles of design
- characteristics of materials, products and defects
- procedures for documenting workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution techniques
- basic building and architectural terminology
- common structural and non-structural methods and technologies used in a residential or small to medium commercial building
- types of services and their structural implications
- materials and methods involved in interior construction
- local regulations/councils etc
- statutory planning regulations affecting interior design
- sub-contractor roles

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively assess structural and non-structural elements of a site to determine implications for interior design • Design structural aspects of interior space • Identify service aspects of interior space • Complete drawings and specifications for interior design incorporating structural elements and services • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures • Communicate effectively and work safely with others involved in the project
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to assessing viability of structures for domestic properties • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning

EVIDENCE GUIDE	
	<p>knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Project brief

- may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target

RANGE STATEMENT	
	market, budget, timeline, consultation requirements and colour requirements
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Structural aspects	<ul style="list-style-type: none"> may include but not be limited to walls, ceilings, flooring, columns, posts, poles, windows, door, beams, cables and trusses
Environmental considerations	<ul style="list-style-type: none"> may include but not be limited to design sustainability, how the use of raw materials effects the ecology and environment and how its continued use will effect the area it has been sourced from, energy consumption in achieving the material, greenhouse gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source
Access implications	<ul style="list-style-type: none"> may include but not be limited to implications for people with disabilities and the aged
Specialist professionals	<ul style="list-style-type: none"> may include but not be limited to engineers, plumbers, electricians, communications consultants, licensed builders and architects

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID5005A Explore and apply creative design methodology to interior space

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to manipulate 3-D interior space and form applying the elements and principles of design in response to a brief.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to observe and analyse a range of complex spatial typologies, manipulate 3-D space and form applying the elements and principles of design and resolve interior space applying the elements and principles of design.</p> <p>This unit covers employability skills in initiative and enterprise and problem solving to apply design principles to form and space in order to meet brief requirements. Communication skills are used to convey design solution and self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Research and evaluate a range of complex spaces	1.1. The spatial relationships of objects in a range of interior spaces are observed and evaluated 1.2. A range of existing <i>spatial typologies</i> are observed and compared 1.3. A range of existing <i>spatial arrangements and organising systems</i> are observed and evaluated
2. Manipulate 3-dimensional space and form applying design methodologies	2.1. The <i>elements and principles of design</i> are applied to organise elements in 3-D interior space to satisfy brief requirements 2.2. 3-D space is manipulated using colour, texture and light 2.3. Complex spatial arrangements are explored to satisfy brief requirements 2.4. Scale, volume and proportion are explored for 3-D space and form to satisfy brief requirements
3. Resolve interior design problems applying design methodologies	3.1. Interior space is resolved applying the elements and principles of design 3.2. Interior design elements are resolved applying the elements and principles of design 3.3. Design solution is evaluated and further refined to satisfy brief requirements 3.4. Interior design solution is <i>communicated</i> through a range of media 3.5. Feasibility of solution is explored and qualified 3.6. Design solution and processes used are reviewed to assess own skill and identify areas for improvement or modification

Required Skills and Knowledge

Required skills

- observing and comparing 3-D spaces
- understanding and applying the elements and principles of design when organising 3-D space
- creativity
- innovation
- research and critical evaluation of existing spaces
- presenting design ideas
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for applying creative methodologies
- organisational and site standards, requirements, policies and procedures for applying creative methodologies
- elements and principles of design
- interrelationship of forms in space
- concept of space
- uses of objects and forms
- interior elements
- space, volume and proportion and their application to interior design
- spatial concepts such as illusion, e.g. Trompe d'l oeil
- relationship of objects in space
- methods of interpreting space
- evidence of design process and progression of ideas
- environmental protection considerations for interior design
- established communication channels and protocols
- problem identification and resolution techniques
- design communication techniques

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Apply design elements and principles to complex 3-D form and interior space • Manipulate the elements and principles of design • Use conceptual models and other 3-D and spatial visualisation techniques • Observe and analyse the way complex spaces are configured and arranged and apply this to resolving interior design problems • Explore, evaluate and refine design solutions • Communicate design ideas
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to exploring and applying creative design methodologies to interior space • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and

EVIDENCE GUIDE	
	<p>application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Spatial typology	<ul style="list-style-type: none"> may include but not be limited to voids, apertures, thresholds, atriums, vertical and horizontal circulation systems, public spaces, multi level spaces, mezzanines, transitional spaces staircases, ceiling planes
Spatial arrangements and organising systems	<ul style="list-style-type: none"> may include but not be limited to xis, grids, lineal arrangements, centralised arrangements, nested spaces, modular systems, hierarchical systems, repetition structures
Elements and principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, similarity, texture, contrast, size, ground, volume, composition, orientation, form, structure, 2-D space, position, proportion, 3-D space, repetition, scale, line, rhythm, pattern, point, symmetry, tone and plane
Communication methods	<ul style="list-style-type: none"> may include but not be limited to diagrams, mind mapping, 3-D sketching, conceptual sketches, collage finished art work photomontage, conceptual models finished models, block diagrams, charts, bubble diagrams and flow charts

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID5006A Design interior lighting

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to design lighting for an interior space to achieve lighting effects required by a design brief.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to design a space and specify required lighting to achieve lighting effects of a design brief.</p> <p>This unit requires employability skills in initiative and enterprise and problem solving in order to design lighting to achieve design objectives. Communication skills are used to access and interpret information using information technologies and complete required documentation. Self management and learning skills are applied in the review of information and design to ensure project needs are met.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		
	<i>LMFID4008A</i>	<i>Assess interior light and recommend light fittings</i>

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess project	<p>1.1. Applicable OHS, legislative and organisational requirements relevant to researching and recommending lighting design are verified and complied with</p> <p>1.2. Project brief is reviewed, confirmed and clarified with client</p> <p>1.3. Parameters for the project are assessed and confirmed</p> <p>1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness</p> <p>1.5. Communication with others is established and maintained</p>
2. Assess current light sources	<p>2.1. Site analysis is conducted to assess the natural light and artificial light sources</p> <p>2.2. Project plans and drawings and site documents are analysed to determine current and potential influences on light source</p> <p>2.3. Factors for consideration are analysed with regards to their impact on lighting</p> <p>2.4. Environmental sustainability of design is assessed in terms of lighting</p> <p>2.5. Design is analysed to determine requirements for achieving desired lighting effects</p>
3. Design lighting for interior project	<p>3.1. Research is conducted to determine cost and energy efficient lighting options to meet the requirements of the integrated design solution</p> <p>3.2. Light fittings and light control devices and their locations are selected and specified on design documentation</p> <p>3.3. Structural design features are reviewed in terms of effect on lighting and specifications determined to support the overall design solution</p> <p>3.4. Non-structural design features are reviewed in terms of effect on lighting and potential improvements identified</p> <p>3.5. Special effects are selected and specified for design</p> <p>3.6. Electrician is consulted to confirm potential complications with changes to lighting design, estimate costings and determine wiring requirements</p>

ELEMENT	PERFORMANCE CRITERIA
	to implement lighting schedule 3.7.Lighting design is assessed for conformance to industry standards and regulations
4. Draw and present lighting design	4.1.Structural and non-structural design features required to achieve lighting effects are documented on design drawings 4.2.Work and product schedules are developed 4.3.Costings are determined and documented 4.4.Lighting features are presented to client

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collecting, organising and understanding information related to work briefs, basic plans and safety procedures
- communicating ideas and information
- accurately recording and maintaining information
- using computer operations for internet searches computer aided drafting (CAD) operations
- analysing performance characteristics
- comparing findings
- communicating with suppliers
- maintaining accurate records
- clarifying and checking taskrelated information
- carrying out work according to OHS practices
- recognising and responding to circumstances outside instructions or personal competence
- efficiently and safely contributing to innovative interior decoration and design processes
- using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- maintaining current knowledge of interior decoration and design techniques
- using the workplace technology related to the use of tools including calculators, measuring and recording devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for assessing interior light and recommending light design
- organisational and site standards, requirements, policies and procedures
- Australian lighting Standards and drawing conventions
- research sources for lighting
- ergonomics, anthropometrics, proxemics and aesthetic values
- natural light characteristics and controls
- artificial light characteristics and controls
- structural influences on lighting
- design themes and design development
- sketching and drawing techniques
- procedures for the recording, reporting and maintenance of workplace records and information

REQUIRED SKILLS AND KNOWLEDGE

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| <ul style="list-style-type: none">• appropriate mathematical procedures for estimation and measurement• environmental protection requirements• established communication channels and protocols• problem identification and resolution techniques |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Assess light for its environmental impact and ability to meet lighting design requirements • Provide the client with cost effective and efficient lighting solutions • Apply design elements and principles in recommending light design • Provide documented lighting layout and schedule • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for lighting design • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to designing interior lighting • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning

EVIDENCE GUIDE	
	<p>knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Lighting design

- may include but not be limited to selection of light fittings, determination of window positions and dimensions, uses of skylights, position of walls, balance of artificial and natural light sources and inclusion of light

RANGE STATEMENT	
	control devices
Project brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, ching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Site analysis	<ul style="list-style-type: none"> may include but not be limited to a visit to the building (home, office or other) to achieve a feel for the intention of the project brief and how natural light may effect it, to assess the level of radiation from the sun into the space and the angles and obstructions caused by other buildings, vegetation or man made objects. It includes recording information and taking photos
Natural light	<ul style="list-style-type: none"> may include but not be limited to light emitted directly by the sun or reflected from it
Artificial light	<ul style="list-style-type: none"> may include but not be limited to lamps, ceiling lights, spotlights, dimmers, wall lights,

RANGE STATEMENT	
	LED, energy efficient globes
Factors for consideration	<ul style="list-style-type: none"> may include but not be limited to ultraviolet exposure, aspect and orientation, window treatments, light characteristics, colour, space layout and construction methods and materials
Light fittings	<ul style="list-style-type: none"> may include but not be limited to lamps, ceiling lights, wall lights, spot lights, flood lights
Light control devices	<ul style="list-style-type: none"> may include but not be limited to motorised or automated mechanisms linked to window treatments
Structural design features	<ul style="list-style-type: none"> may include but not be limited to placement and dimensions of walls, windows, doors, flooring and ceiling features, poles, posts and columns
Non-structural lighting design features	<ul style="list-style-type: none"> may include but not be limited to use of colour, fixtures, fittings, finishes, soft furnishings and furniture
Special effects	<ul style="list-style-type: none"> may include but not be limited to dimming, spotlight, flooding, brightness, creating space and creating focus

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFID5007A Decorate for events

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to decorate for events including expos, design shows and other events in accordance with project briefs.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in interior decoration and design operations of all sizes. Decorating for events applies to a retail, consulting or design and decoration studio environment and involves application of skills and knowledge at a para-professional level. These skills and knowledge are to be used within the scope of the person's job and authority.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the decoration process. Planning and organising and problem solving skills are required to apply decoration processes and initiative and enterprise are required to develop and sell decoration ideas. Self management and learning skills are applied to assess and reflect on own skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse the project brief	<p>1.1. Applicable OHS, legislative and organisational requirements relevant to decorating for events are verified and complied with</p> <p>1.2. Project brief is reviewed, confirmed and clarified with client</p> <p>1.3. Key requirements and parameters for the event are assessed and confirmed and constraints determined</p> <p>1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness</p> <p>1.5. Communication with event organisers is established and maintained</p>
2. Analyse event information	<p>2.1. Site analysis is conducted to assess the requirements of the space requiring work</p> <p>2.2. Marketing strategy for the event is analysed and themes and concepts explored and evaluated in accordance with event objectives</p> <p>2.3. Lifestyle requirements and key characteristics of the target market are assessed and confirmed with event organisers</p> <p>2.4. Restrictions and timelines are ascertained from the event organisers</p> <p>2.5. Intended function of the event display is ascertained taking into account movement of people around displays and other displays</p> <p>2.6. Environmental considerations are analysed in respect to the space</p> <p>2.7. Cultural considerations are evaluated in respect to the space</p> <p>2.8. Ergonomic, anthropometric and proxemic principles are assessed in respect to the space and the intended products</p>
3. Develop decoration ideas	<p>3.1. Products, materials and finishes are explored in accordance with the marketing strategy and discussed with event organisers</p> <p>3.2. Product quantities and qualities are calculated in accordance with event budget</p> <p>3.3. Performance and characteristics of products are assessed and reviewed in accordance with event requirements</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.4. <i>Costs</i> associated with purchasing and obtaining the products are analysed and evaluated</p> <p>3.5. <i>Colour</i> options are explored and discussed for the event</p> <p>3.6. <i>Sketches and drawings</i> are completed and positioning of products and <i>accessories</i> identified</p>
4. Complete decoration proposal	<p>4.1. <i>Supplies</i> necessary to complete the project are sourced and costed</p> <p>4.2. Suitable <i>contractors</i> are sourced and <i>quotes</i> obtained</p> <p>4.3. Specifications for materials and processes are developed</p> <p>4.4. Work plan is developed and evaluated</p> <p>4.5. Costings and timelines are compiled and developed into a full project proposal</p> <p>4.6. Proposal is presented to client</p> <p>4.7. Client feedback and response is analysed to determine success in achieving client satisfaction</p> <p>4.8. Own performance in the design process is examined to identify strengths and weaknesses</p> <p>4.9. Areas for improvement are identified</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- applying principles and elements of design
- communicating decoration concepts
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- drawing using manual and computer based techniques
- sequencing operations
- determining specifications
- computer aided design techniques
- clarifying and checking taskrelated information
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for decorating for events
- organisational and site standards, requirements, policies and procedures
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs used to support proposal development
- event display techniques
- design themes and design development
- colours, furnishings and decorations
- sketching and drawing techniques
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution techniques

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively develop decoration proposal for one event to provide cost effective options that meet event objectives • Effectively apply design elements and principles in decorating for events • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for decorating for events • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to decorating for events • specifications and work
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Project brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline, consultation requirements and colour requirements
Clients	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public

RANGE STATEMENT	
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Events	<ul style="list-style-type: none"> may include but not be limited to expos, design shows, private displays, trade shows, magazine spreads, newspaper articles, advertising, for local, national and international events
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual, social and cultural differences, control of tone of voice and body language
Site analysis	<ul style="list-style-type: none"> may include but not be limited to a visit to the event location to achieve a feel for the intention of the project brief and how services may be affected by it, recording information and taking photos
Marketing strategy	<ul style="list-style-type: none"> may include but not be limited to the overall marketing objectives and the strategies and programmes of action designed to achieve those objectives
Themes	<ul style="list-style-type: none"> may include but not be limited to variations of colour ways (based on directions media), furnishing trends and decoration trends
Concepts	<ul style="list-style-type: none"> may include but not be limited to ideas generated to respond to the project brief and client requirements through both ideation drawings or sketching and written explanation
Lifestyle requirements	<ul style="list-style-type: none"> may include but not be limited to influences such as religious, climatic, societal, lifestyle, living conditions, infrastructure, status and habitude
Restrictions	<ul style="list-style-type: none"> may include but not be limited to laws, regulations or policies which may affect a project or those working

RANGE STATEMENT	
	on it, such as local government planning approval, work site entry legislation, licensing or heritage laws
Timelines	<ul style="list-style-type: none"> may include but not be limited to the agreed project time span set and agreed for the project
Environmental considerations	<ul style="list-style-type: none"> may include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will effect the area it has been sourced from, energy consumption in achieving the material, greenhouse gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source
Cultural considerations	<ul style="list-style-type: none"> may include but not be limited to demography, geography (local, regional, national), religious, climatic, societal, cultural, lifestyle, attitudinal, gratification, honour, living conditions, infrastructure, status and habitude
Ergonomics	<ul style="list-style-type: none"> may include but not be limited to the study of the efficiency of persons in their working environment
Anthropometrics	<ul style="list-style-type: none"> may include but not be limited to the scientific study of the measurements of the human body
Proxemics	<ul style="list-style-type: none"> may include but not be limited to the study of socially conditioned spatial factors in ordinary human relations
Products	<ul style="list-style-type: none"> may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built-in cabinetry or fittings, light fittings, lamps and picture framing
Material	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Finishes	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures
Quality	<ul style="list-style-type: none"> may include but not be limited to an inspection system for ensuring that pre-determined quality standards are being met, highlighting non-conformances requiring intervention
Performance and characteristics	<ul style="list-style-type: none"> may include but not be limited to assessment of

RANGE STATEMENT	
	products to determine if they meet the requirements of the intended end use application and how well they do it, the durability and composition of the product
Costs	<ul style="list-style-type: none"> may include but not be limited to the cost of products and materials together with the cost of obtaining them either locally, interstate or overseas
Colours	<ul style="list-style-type: none"> may include but not be limited to colour principles, psychology, fundamentals, coordination, perception, contrast, harmony, effects on space, formulas and colour wheels
Sketches and drawings	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand, drafted technical drawings or drawings produced on computer using CAD software packages. These usually contain project specifications
Accessories	<ul style="list-style-type: none"> may include but not be limited to trinkets, ceramics, trays, vases, carvings, baskets, pots, plants, candles, clocks, silverware, mirrors, frames, screens, floral displays, haberdashery, glassware, fireplace items, gifts, hand crafts, water features, photographs, pottery, personal items, statues, book ends, bowls and bottles
Supplies	<ul style="list-style-type: none"> may include but not be limited to paints, furnishings, decorations and other internal fit-out products
Contractors	<ul style="list-style-type: none"> may include builders, painters, tilers, carpet layers, sanders, cabinetmakers, curtain makers, picture framers, electricians, plumbers and plasterers
Quoting	<ul style="list-style-type: none"> may include but not be limited to a price for a project taking account of the sizes associated with the project, the cost of materials, labour and overheads

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID5008A Design for people with disabilities and the elderly

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit specifies the outcomes required to design for people with disabilities and the elderly in residential environments including kitchens, bathrooms, bedrooms, lounge rooms, dining rooms, family rooms and multi-use rooms, for the solution of interior decoration and design projects and in accordance with project briefs.</p>
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in interior decoration and design operations of all sizes. Designing for people with disabilities and the elderly in residential environments applies to a retail, consulting or design and decoration studio environment and involves application of skills and knowledge at a para-professional level. These skills and knowledge are to be used within the scope of the person's job and authority.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the design process. Planning and organising and problem skills are required to apply design processes and initiative and enterprise are required to develop to design ideas. Self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse the project brief	1.1. Applicable OHS, legislative and organisational requirements relevant to designing for residential spaces are verified and complied with 1.2. Project brief is reviewed, confirmed and clarified with client 1.3. Parameters for the project are assessed and confirmed 1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness 1.5. Communication with others is established and maintained 1.6. Relevant research is conducted to gain all information which may be used to inform the design process 1.7. All required information is accessed and interpreted to inform the design process
2. Obtain client information	2.1. Site analysis of the residential environment is conducted to assess work requirements 2.2. Nature of the disability or age reducing senses are assessed 2.3. Clients' health professionals are liaised with to ascertain any further requirements 2.4. Themes and concepts are presented and discussed with the client in accordance with their capacity 2.5. Products, materials and finishes are proposed and discussed with the client 2.6. Colour options are proposed and discussed with the client 2.7. Restrictions and timelines are ascertained from the client 2.8. Lifestyle requirements are assessed and confirmed with the client 2.9. Product quantities and qualities are calculated in accordance with client budget information
3. Design space	3.1. Intended function of the domestic space is ascertained from the client taking into account the position of doors and windows and any physical requirements 3.2. Performance and characteristics of products are

ELEMENT	PERFORMANCE CRITERIA
	<p>assessed and reviewed in accordance with client requirements</p> <p>3.3. Existing conditions of the domestic space are analysed for current or previous usage and any special requirements for access or egress</p> <p>3.4. Environmental considerations are analysed in respect of the space</p> <p>3.5. Cultural considerations are evaluated in respect of the space</p> <p>3.6. Ergonomic, anthropometric and proxemic principles are assessed in respect of the space, the intended products and client special requirements</p> <p>3.7. Costs associated with purchasing and obtaining the products are analysed and reported</p> <p>3.8. Sketches and drawings are completed and prepared for use by contractors and for positioning of products and accessories</p>
4. Plan space	<p>4.1. Supplies necessary to complete the project are sourced and costed</p> <p>4.2. Suitable contractors are sourced and quotes obtained</p> <p>4.3. Specifications for materials and processes are developed</p> <p>4.4. Work plan is developed and evaluated</p> <p>4.5. Costings and timelines are compiled and developed into a full project proposal</p> <p>4.6. Proposal terms and conditions are negotiated with the client</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- applying principles and elements of design
- communicating design concepts
- translating needs into design solutions
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- drawing using manual and computer based techniques
- sequencing operations
- meeting specifications
- clarifying and checking taskrelated information
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for designing for people with disabilities and the elderly
- organisational and site standards, requirements, policies and procedures for designing for people with disabilities and the elderly
- Australian Standards and the Building Code of Australia
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- design themes and design development
- colours, furnishings and decorations
- disabilities and age considerations
- sketching and drawing
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• problem identification and resolution |
|---|

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively design for at least two spaces to cater for people with disabilities or the elderly to provide the client with cost effective options which inform the project brief development • Effectively apply design elements and principles in designing for people with disabilities and the elderly • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for designing for people with disabilities and the elderly • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to designing for people with disabilities and the elderly in domestic environments • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of

EVIDENCE GUIDE	
	<p>tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Project brief

- may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target

RANGE STATEMENT	
	market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Site analysis	<ul style="list-style-type: none"> may include but not be limited to a visit to the domestic building (house or other) to achieve a feel for the intention of the project brief and how services may be affected by it, recording information and taking photos
Disabilities	<ul style="list-style-type: none"> may include but not be limited to physical disabilities which have rendered a person to a wheelchair or walking frame, dementia or other intellectual disabilities
Reducing senses	<ul style="list-style-type: none"> may include but not be limited to senses reduced by the cause of age such as reduced eyesight, loss of colour recognition, perception of space, reduced strength and capacity to move around easily, reduced sense of touch to tactile surfaces and reduced capacity to hear
Themes	<ul style="list-style-type: none"> may include but not be limited to variations of colour ways (based on directions media),

RANGE STATEMENT	
	furnishing trends and decoration trends
Concepts	<ul style="list-style-type: none"> may include but not be limited to ideas generated to respond to the project brief and client requirements through both ideation drawings or sketching and written explanation
Products	<ul style="list-style-type: none"> may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built-in cabinetry or fittings, light fittings, lamps and picture framing
Material	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Finishes	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures
Colours	<ul style="list-style-type: none"> may include but not be limited to colour principles, psychology, fundamentals, coordination, perception, contrast, harmony, effects on space, formulas and colour wheels
Restrictions	<ul style="list-style-type: none"> may include but not be limited to laws, regulations or policies which may affect a project or those working on it, such as local government planning approval, work site entry legislation, licensing, heritage laws or health care requirements
Timelines	<ul style="list-style-type: none"> may include but not be limited to the agreed project time span set and agreed for the project
Lifestyle requirements	<ul style="list-style-type: none"> may include but not be limited to influences such as physical capacity, religious, climatic, societal, lifestyle, living conditions, infrastructure, status and habitude
Quality	<ul style="list-style-type: none"> may include but not be limited to an inspection system for ensuring that pre-determined quality standards are being met, highlighting non-conformances requiring intervention
Spaces	<ul style="list-style-type: none"> may include but not be limited to domestic environments with rooms such as bedrooms, living spaces, multi-purpose rooms, storage

RANGE STATEMENT	
	rooms, studies, garages, rumpus rooms, media rooms, entertainment areas, halls and pantries
Physical requirements	<ul style="list-style-type: none"> may include but not be limited to wheelchair turning requirements, height of basins, showers, mirrors, benches, shower space for wheelchair, toilet access, handgrips or rails, lights for deafness, increased lighting, higher magnifying mirrors and non-slip tiles
Performance and characteristics	<ul style="list-style-type: none"> may include but not be limited to assessment of products to determine if they meet the requirements of the intended end use application and how well they do it, and the durability and composition of the product
Existing conditions	<ul style="list-style-type: none"> may include but not be limited to traffic flow, architectural features, style, furniture placement and electrical outlets and features
Access and egress	<ul style="list-style-type: none"> may include but not be limited to ensuring door widths will accept wheelchairs, ramps are established to allow for rise or fall from exits and entrances
Environmental considerations	<ul style="list-style-type: none"> may include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will effect the area it has been sourced from, energy consumption in achieving the material, greenhouse gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source
Cultural considerations	<ul style="list-style-type: none"> may include but not be limited to demography, geography (local, regional, national), religious, climatic, societal, cultural, lifestyle, attitudinal, gratification, honour, living conditions, infrastructure, status and habitude
Ergonomics	<ul style="list-style-type: none"> may include but not be limited to the study of the efficiency of persons in their living environment
Anthropometrics	<ul style="list-style-type: none"> may include but not be limited to the scientific study of the measurements of the human body
Proxemics	<ul style="list-style-type: none"> may include but not be limited to the study of socially conditioned spatial factors in ordinary human relations

RANGE STATEMENT	
Costs	<ul style="list-style-type: none"> may include but not be limited to the cost of products and materials together with the cost of obtaining them either locally, interstate or overseas
Sketches and drawings	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand, drafted technical drawings or drawings produced on computer using CAD software packages. These usually contain project specifications
Accessories	<ul style="list-style-type: none"> may include but not be limited to trinkets, ceramics, trays, vases, carvings, baskets, pots, plants, candles, clocks, silverware, mirrors, frames, screens, floral displays, haberdashery, glassware, fireplace items, gifts, hand crafts, water features, photographs, pottery, personal items, statues, book ends, bowls and bottles
Supplies	<ul style="list-style-type: none"> may include but not be limited to paints, furnishings, decorations and other internal fit-out products
Contractors	<ul style="list-style-type: none"> may include builders, painters, tilers, carpet layers, sanders, cabinetmakers, curtain makers, picture framers, electricians, plumbers and plasterers
Quoting	<ul style="list-style-type: none"> may include but not be limited to a price for a project taking account of the sizes associated with the project, the cost of materials, labour and overheads

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID5009A Research and recommend colour and applied finishes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to research and recommend colour and applied finishes to achieve special effects for interior decoration and design solutions.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent research and recommendation of colour and applied finishes including a range of specialist painting and finishing effects, using research methodologies to identify the latest technologies.</p> <p>This unit requires employability skills in initiative and enterprise and problem solving in order to direct the research and selection of materials to achieve desired effects. Communication skills are used to access and interpret information using information technologies and complete required documentation. Self management and learning skills are applied in the review of information and arrangements to ensure project needs are met.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		
	<i>LMFID4001A</i>	<i>Research, analyse and apply colour for interior spaces</i>

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse project requirements	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational requirements</i> relevant to researching and recommending <i>colour and applied finishes</i> are verified and complied with</p> <p>1.2. <i>Project brief</i> is reviewed and analysed to determine desired effects for interior space</p> <p>1.3. <i>Aesthetic</i> requirements of the space are assessed</p> <p>1.4. <i>Tactile</i> requirements of the desired effect in relation to the design are analysed</p> <p>1.5. Client requirements and desired effects are reviewed, confirmed and clarified</p>
2. Research colour and applied finishes	<p>2.1. Social, psychological, <i>cultural</i> and <i>historical</i> relationships of colour are researched in relation to their interior decoration uses and applications</p> <p>2.2. Colour <i>trends</i> are researched to ascertain the latest colour fashions and influences</p> <p>2.3. New technologies are researched and reported</p> <p>2.4. <i>Application methods</i> and available expertise for the desired effect are assessed</p> <p>2.5. Application processes and techniques, and available expertise for the desired effect are assessed</p> <p>2.6. <i>Costs</i> of materials and application methods are assessed and compared</p> <p>2.7. <i>Environmental impact</i> of materials and application methods are assessed</p> <p>2.8. <i>Longevity and restorability</i> of materials and application methods are researched</p> <p>2.9. <i>Hazards</i> associated with the use and application of materials are researched</p> <p>2.10. Quality of materials and application methods are assessed</p> <p>2.11. <i>Sources</i> or suppliers of coloured <i>products</i> or <i>finishes</i> are found and recorded</p>
3. Recommend colour and applied finishes	<p>3.1. Research information is <i>critically analysed</i> in the context of the design brief requirements</p> <p>3.2. Effects are examined in terms of <i>elements</i> and <i>principles of design</i> to determine fit for client requirements</p> <p>3.3. Experimentation with colour and applied finishes is undertaken to refine and test material and application</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>methods</p> <p>3.4. Colour products and finishes are selected according to the style, size, lighting and intended use of the space</p> <p>3.5. Paint finishes are selected to suit surface types, location and spaces</p> <p>3.6. Application methods are selected and specified to meet client requirements</p> <p>3.7. Presentation of research information is made, highlighting the findings and rationale for the materials and application methods chosen</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collecting, organising and understanding information related to work briefs, basic plans and safety procedures
- communicating ideas and information
- accurately recording and maintaining information
- using computer operations for internet access and searches
- analysing performance characteristics
- comparing findings
- communicating with suppliers
- maintaining accurate records
- clarifying and checking task-related information
- carrying out work according to OHS practices
- recognising and responding to circumstances outside instructions or personal competence
- efficiently and safely contributing to innovative interior decoration and design processes
- using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- maintaining current knowledge of interior decoration and design techniques
- using the workplace technology related to the use of tools including calculators, measuring and recording devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to researching and recommending materials and application methods
- organisational and site standards, requirements, policies and procedures for researching and recommending materials and application methods
- elements and principles of design
- aesthetic values
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- research techniques
- effects of finishes and finishing techniques
- colour theory
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and

REQUIRED SKILLS AND KNOWLEDGE

information

- | |
|---|
| <ul style="list-style-type: none">• appropriate mathematical procedures for estimation and measurement• environmental protection requirements• established communication channels and protocols• problem identification and resolution |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively research and select colour and applied finishes to arrive at a solution which meets client requirements for a minimum of two projects • Visually present scheme to illustrate how ideas meet overall design requirements • Effectively apply design elements and principles to the research and selection of colour and applied finishes • Effectively research and select colour and applied finishes in accordance with the concepts and design brief • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for researching and recommending colour and applied finishes • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to researching and recommending finishes • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and

EVIDENCE GUIDE	
	<p>accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <ul style="list-style-type: none"> • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Colour and applied finishes

- may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, traditional finishes, plastic coatings, UV protected coatings, liquid coatings, synthetic coatings, synthetics, paper, glass, vinyls,

RANGE STATEMENT	
	textiles, laminates, plastics, stainless steel, metals, veneers, ceramics and stone based products, application techniques and new and emerging technologies
Project brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline, consultation requirements and colour requirements
Aesthetics	<ul style="list-style-type: none"> may include but not be limited to the consideration of appeal to a large number of people; products are pleasing to the eye of many who view it
Tactile	<ul style="list-style-type: none"> may include but not be limited to that perceived by the sense of touch and producing the effect of three-dimensional depth
Cultural	<ul style="list-style-type: none"> may include but not be limited to demography, geography (local, regional, national), religious, climatic, societal, cultural, lifestyle, attitudinal, gratification, honour, living conditions, infrastructure, status and habitude
Historical	<ul style="list-style-type: none"> may include but not be limited to colour study of early civilisation, Berlin & Kay, Aristotle, Newton, Hippocrates, Leonardo Da Vinci, the Renaissance, Goethe's theory of colours, Chevreul, Bauhaus School
Trends	<ul style="list-style-type: none"> may include but not be limited to new directions resulting from events that are at times subtle and others significant. Colour trends develop the same way. Colour experts gather information from around the world and study changing events and ideas to produce a comprehensive colour story, in the same way that designers seek unique styles and incorporate current philosophies into their work
Application methods	<ul style="list-style-type: none"> may include but not be limited to spraying, painting, applicators, gluing, vacuum wrapping, rubbing and bonding
Costs	<ul style="list-style-type: none"> may include but not be limited to the cost of

RANGE STATEMENT	
	products and materials together with the cost of obtaining them either locally, interstate or overseas
Environmental impact	<ul style="list-style-type: none"> may include but not be limited to how the making and use of finishes and materials effects the environment and how its continued use will effect those around you, energy consumption in applying the material, greenhouse gases created, waste levels and resource utilisation. Similarly what impact will be felt by reducing or stopping use of the finish or materials
Longevity and restorability	<ul style="list-style-type: none"> may include but not be limited to an analysis of how long the finish or material is expected to last, while maintaining quality of aesthetic value and how readily the finish or material can be upgraded, repaired or replaced
Hazards	<ul style="list-style-type: none"> may include but not be limited to toxins and gases released by some finishes, glues and materials which may be harmful to people if not used correctly
Sources	<ul style="list-style-type: none"> may include but not be limited to paint shops, suppliers, wholesalers, retailers, manufacturers and designers
Products	<ul style="list-style-type: none"> may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built-in cabinetry or fittings, light fittings, lamps, picture framing, tapware, laundry fittings, bathroom fittings, toilet fittings and kitchen fittings
Finishes	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures
Critical analysis	<ul style="list-style-type: none"> may include but not be limited to comparing, contrasting, reflecting, critiquing, considering merit, discussion and debate
Elements of design	<ul style="list-style-type: none"> may include but not be limited to line, shape, form (geometric or organic), texture, and colour
Principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity,

RANGE STATEMENT	
	style, focus, scale, dominant, sub-dominant or subordinate relationship, emphasis, proximity, alignment, space, anthropometry, ergonomics, arrangement, aesthetic relations, tension and development methods

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID5010A Provide interior styling service

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the knowledge and skills required to provide design styling services for a range of interior spaces.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to determine client styling requirements and select, source and place objects and accessories for visual effect in an interior space. Styling may be for residential, retail, or commercial environments and may be for permanent or temporary application.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the styling process. Planning and organising and problem solving skills are required to apply styling processes and initiative and enterprise are required to develop to styling ideas. Self management and learning skills are applied to assess and reflect on own styling skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Confirm services with client	1.1. The range of services offered as interior <i>stylist</i> are discussed with <i>client</i> 1.2. Services typically provided to client target market are discussed with client 1.3. <i>Suppliers</i> appropriate to client target market are identified and ability to manage supply for the project discussed with client 1.4. Styling service to be provided is negotiated and confirmed with t client
2. Determine client style requirements	2.1. Applicable <i>OHS, legislative</i> and <i>organisational requirements</i> relevant to styling a space are verified and complied with 2.2. <i>Project brief</i> is reviewed, confirmed and clarified with client 2.3. Parameters for the project are assessed and confirmed 2.4. <i>Communication</i> with others is established and maintained 2.5. Styling requirements are identified and confirmed with client
3. Develop style design	3.1. Space dimensions are measured and needs of the space assessed 3.2. <i>Sketches and drawings</i> are prepared to illustrate the space 3.3. Plan <i>layout</i> is prepared taking into account <i>artistic relevance</i> and <i>colour</i> balance 3.4. <i>Entertainment values</i> and the effect on end users are analysed 3.5. <i>Cultural</i> and <i>historical considerations</i> are evaluated in respect of the space style 3.6. Styling requirements for the space are determined in order to create a specific style 3.7. <i>Products, finishes and accessories</i> necessary to complete the project are selected and costed 3.8. <i>Materials</i> and processes are specified 3.9. <i>Costings</i> and <i>timelines</i> are compiled and developed 3.10. Detailed budget is prepared to meet styling requirements
4. Create visual impact	4.1. Products, finishes and accessories are sourced and

ELEMENT	PERFORMANCE CRITERIA
by styling a space	organised to meet brief requirements 4.2. Visual impact is created by strategically placing objects into the space, taking into consideration design elements and principles 4.3. Installation of products, finishes and accessories is monitored to ensure the essence of the image or style is maintained 4.4. Arrangement is resolved to meet client needs and project brief

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- determining requirements of the 'unseen client'
- sourcing accessories including furniture, cushions, throws, rugs, vases, flowers, object d'art, pictures, wall hangings, kitchen implements, crockery, cutlery etc
- styling and accessorising interior/exterior spaces
- preparing specification 'shopping list' and costings
- building relationships with clients and suppliers
- creating visual impact or a experience within a space
- working with other types of stylists
- creating theatre or stage setting for a product
- developing a schedule of services
- styling for magazines
- working to a budget
- borrowing/renting accessories
- display units, project homes and marketing suites
- bulk buying
- applying principles and elements of design
- communicating style concepts
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- sequencing operations
- meeting specifications
- clarifying and checking taskrelated information
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for styling a space
- organisational and site standards, requirements, policies and procedures for styling a space
- elements and principles of design
- client target markets including real estate agents, home owners or vendors, magazines and television, project marketers, display units, project homes, retail outlets/window displays

REQUIRED SKILLS AND KNOWLEDGE

- client lifestyle issues, personal taste, budget, clients' background, intentions and future plans, current fashions/trends
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- design themes and design development
- colours, furnishings and decorations
- sketching and drawing
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively style a space with the products, finishes and accessories to style concepts as part of the final solution to the project brief • Effectively apply design elements and principles to style a space • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for styling a space • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to providing interior styling services • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Stylists	<ul style="list-style-type: none"> • may include but not be limited to interior decorators or designers providing services to create visual effects in interior spaces • roles of a stylist include visual merchandiser in a retail or commercial environment, home stylist, magazine/TV stylist, stylist for trade show displays, display units, car showrooms etc
Client	<ul style="list-style-type: none"> • may include but not be limited to real estate agents wanting properties prepared for sale, events coordinators requiring themed or decorated venues and retailers preparing shop themes or displays • may also include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Suppliers	<ul style="list-style-type: none"> • may include but not be limited to suppliers of furniture, furnishings, accessories and fittings
OHS requirements	<ul style="list-style-type: none"> • are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> • are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant

RANGE STATEMENT	
	industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Project brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones for the project, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline and consultation requirements
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Sketches and drawings	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand, drafted technical drawings or drawings produced on computer using computer aided drafting (CAD) software packages. These usually contain project specifications
Layout	<ul style="list-style-type: none"> may include but not be limited to the plan of how a room will be designed and decorated showing the placement of products
Artistic relevance	<ul style="list-style-type: none"> may include but not be limited to the connection between creativity and the design theme
Colour	<ul style="list-style-type: none"> may include but not be limited to colour principles, psychology, fundamentals, coordination, perception, contrast, harmony,

RANGE STATEMENT	
	effects on space, formulas and colour wheels
Entertainment values	<ul style="list-style-type: none"> may include but not be limited to comical, informative, meditative, sales focused or visually pleasing
Cultural considerations	<ul style="list-style-type: none"> may include but not be limited to demography, geography (local, regional, national), religious, climatic, societal, cultural, lifestyle, attitudinal, gratification, honour, living conditions, infrastructure, status and habitude
Historical considerations	<ul style="list-style-type: none"> may include but not be limited to influences from styles, periods and movements over the past centuries and how this research may inform current projects
Products	<ul style="list-style-type: none"> may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built-in cabinetry or fittings, light fittings, lamps, picture framing, tapware, laundry fittings, bathroom fittings, toilet fittings and kitchen fittings
Finishes	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures
Accessories	<ul style="list-style-type: none"> may include but not be limited to trinkets, ceramics, trays, vases, carvings, baskets, pots, plants, candles, clocks, silverware, mirrors, frames, screens, floral displays, haberdashery, glassware, fireplace items, gifts, hand crafts, water features, photographs, pottery, personal items, statues, book ends, bowls and bottles
Materials	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Costings	<ul style="list-style-type: none"> may include but not be limited to the cost of products and materials used during completion of the project, labour and overhead expenses
Timelines	<ul style="list-style-type: none"> may include but not be limited to the agreed project time span set and agreed for the project

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID5011A Specify soft furnishings for complete interior solution

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to specify innovative and cost effective decorative solutions for furniture, floor covering, soft furnishings and window dressings to enhance and compliment interior design schemes.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent research and recommendation of current styles and technologies for the decoration of furniture, soft furnishings, floor coverings and window dressings.</p> <p>This unit requires employability skills in initiative and enterprise and problem solving in order to direct the research and recommending of suitable decorative solutions. Communication skills are used to access and interpret information using information technologies and complete decoration proposals. Self management and learning skills are applied in the review of information and arrangements to ensure project needs are met.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess project requirements	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational requirements</i> relevant to researching and recommending decorative solutions are verified and complied with</p> <p>1.2. <i>Project brief</i> is reviewed, confirmed and clarified with <i>client</i></p> <p>1.3. <i>Parameters</i> for the project are assessed and confirmed</p> <p>1.4. <i>Resources</i> are selected appropriate to work requirements and checked for operational effectiveness</p> <p>1.5. <i>Communication</i> with others is established and maintained</p> <p>1.6. Intended applications and effects for the windows, furniture and soft furnishings are identified</p>
2. Determine decorative treatments for windows and openings	<p>2.1. <i>Window treatments</i>, their application and fixing technologies are <i>researched</i> to determine suitability for client requirements</p> <p>2.2. New technologies in window treatments are researched and relevance for decorative projects identified</p> <p>2.3. The types of openings and their requirements are identified and a range of possible creative solutions determined</p> <p>2.4. Window or opening is measured and details recorded accurately for a range of window treatments</p> <p>2.5. Fabric requirements are calculated and manufacturing requirements determined for a range of window treatments taking into consideration <i>pattern repeats</i></p>
3. Specify furniture transformation	<p>3.1. Methods of transforming a range of furniture and furnishings are researched</p> <p>3.2. Design considerations are investigated and assessed against the project brief</p> <p>3.3. Fabrics and materials are selected for furniture</p> <p>3.4. Furniture transformation ideas are documented and specified</p> <p>3.5. Cost estimates are calculated and assessed against project budget</p>

ELEMENT	PERFORMANCE CRITERIA
4. Specify soft floor coverings	<p>4.1. Range of <i>floor coverings</i> available for application are identified and analysed to determine most suitable fit</p> <p>4.2. New technologies in flooring are researched and relevance for decorative project identified</p> <p>4.3. The features, limitations and <i>environmental impact</i> of selected floor covering is assessed against performance requirements and environmental standards</p> <p>4.4. Floor area is measured and specifications recorded for flooring solution</p> <p>4.5. Costs are calculated and assessed against project budget</p>
5. Specify soft furnishings	<p>5.1. <i>Soft furnishings</i> are selected to meet the requirements of the brief and the overall design scheme</p> <p>5.2. Specifications are documented to record colour, sizing, style and fabric details</p> <p>5.3. Arrangement of soft furnishings is documented in design schedules</p> <p>5.4. Costs of soft furnishings are calculated and assessed against project budget</p>
6. Document and present decorative recommendations	<p>6.1. Innovative design solution to brief is presented taking into consideration parameters of design brief</p> <p>6.2. Fabrics, furnishings and fixing technologies are selected taking into consideration parameters of project brief</p> <p>6.3. Specifications are documented for all treatment recommendations</p> <p>6.4. Schedule is presented that includes both high and low costings to support design solution</p> <p>6.5. Solution to brief is visualised graphically and in 3-D form</p> <p>6.6. Sample board is created to enhance and support the design intention</p> <p>6.7. Feedback and follow up is instigated and maintained with the client</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collecting, organising and understanding information related to work briefs, basic plans and safety procedures
- communicating ideas and information
- accurately recording and maintaining information
- using computer operations for internet access and searches
- analysing performance characteristics
- comparing findings
- developing visual communication tools
- maintaining accurate records
- clarifying and checking task-related information
- carrying out work according to OHS practices
- recognising and responding to circumstances outside instructions or personal competence
- efficiently and safely contributing to innovative interior decoration and design processes
- using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- maintaining current knowledge of interior decoration and design techniques
- using the workplace technology related to the use of tools including calculators, measuring and recording devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for researching and recommending decorative treatments
- organisational and site standards, requirements, policies and procedures for researching and recommending decorative treatments
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- soft material types and textiles
- design themes and design development
- colours, furnishings and decoration options
- sketching and drawing techniques
- procedures for the recording, reporting and maintenance of workplace records and

REQUIRED SKILLS AND KNOWLEDGE

information

- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution techniques

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively research and recommend decorative treatments for windows, soft furnishings and furniture to meet the design requirements of at least two project briefs • Effectively apply design elements and principles to recommended decorative solution • Visually present decorative solutions to illustrate how ideas meet overall design requirements • Correctly calculate quantities and costings required to achieve decorative solution • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for researching and recommending decorative treatments • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to researching and recommending soft furnishings • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of

EVIDENCE GUIDE	
	<p>workplace relevant contexts) together with application of underpinning knowledge</p> <ul style="list-style-type: none"> • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Project brief

- may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target

RANGE STATEMENT	
	market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment, catalogues and magazines
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Window treatments	<ul style="list-style-type: none"> may include but not be limited to curtains, blinds and awnings
Research	<ul style="list-style-type: none"> may include but not be limited to internet, magazines, catalogues, retail or wholesale outlets, books, site visits
Pattern repeats	<ul style="list-style-type: none"> may include but not be limited to textiles or fabrics with a distinctive print and how often that pattern repeats within the applicable square metreage required for a project so as to meet conformity
Floor coverings	<ul style="list-style-type: none"> may include but not be limited to carpets and rugs
Environmental impact	<ul style="list-style-type: none"> may include but not be limited to how the sourcing and use of materials effects the environment and how its continued use will effect the area the material was sourced from, energy consumption in processing the

RANGE STATEMENT	
	material, greenhouse gases created, waste levels and resource utilisation. Similarly what impact will be felt by reducing or stopping use of the material
Soft furnishings	<ul style="list-style-type: none"> may include but not be limited to window treatments, blinds, awnings, trimmings, bedding treatments, lampshades, cushions, upholstery and accessories

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID5012A Research and recommend artwork

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to research and recommend artwork for various design and decoration solutions to client and project brief requirements.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in interior decoration and design operations of all sizes. Researching and recommending artwork applies to a retail, consulting or design and decoration studio environment and involves application of skills and knowledge at a supervisory equivalent level. These skills and knowledge are to be used within the scope of the person's job and authority.</p> <p>This unit requires employability skills in initiative and enterprise and problem solving in order to direct the research and recommending of artwork. Communication skills are used to access and interpret information using information technologies and complete artwork proposals. Self management and learning skills are applied in the review of information and art to ensure project needs are met.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for artwork research	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational requirements</i> relevant to researching and recommending artwork are verified and complied with</p> <p>1.2. <i>Project brief</i> is reviewed, confirmed and clarified with <i>client</i></p> <p>1.3. <i>Parameters</i> for the project are assessed and confirmed</p> <p>1.4. <i>Resources</i> are selected appropriate to work requirements and checked for operational effectiveness</p> <p>1.5. <i>Communication</i> with others is established and maintained</p>
2. Research artwork	<p>2.1. <i>Aesthetic</i> requirements of the <i>artwork</i> are assessed and compared with surrounding furniture and colours</p> <p>2.2. Intended application for the artwork is analysed and reviewed in accordance with the available space</p> <p>2.3. New artwork and artists are sourced, researched and reported</p> <p>2.4. <i>Framing</i> types and styles are researched and reported</p> <p>2.5. <i>Properties</i> of the <i>materials</i> used in the production of artwork are analysed and evaluated</p> <p>2.6. <i>Manufacturing processes</i>, art styles and available expertise for the desired artwork are assessed</p> <p>2.7. Costs and availability of artwork are assessed and compared</p> <p>2.8. <i>Environmental impact</i> of artwork materials used are assessed</p> <p>2.9. <i>Longevity and restorability</i> quality of artwork is researched</p> <p>2.10. Project is measured for artwork requirements, calculating quantities and requirements</p>
3. Recommend artwork	<p>3.1. Selected or <i>commissioned</i> artwork quantities and <i>qualities</i> are presented and promoted to the client</p> <p>3.2. <i>Performance and characteristics</i> of selected artwork are presented and promoted to the client</p> <p>3.3. <i>Costs</i> associated with purchasing and obtaining the</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>artwork are provided in <i>quote</i> form to the client</p> <p>3.4. Presentation of research information is made, highlighting the findings and rationale for the artwork chosen</p> <p>3.5. Artwork is selected and positioned according to the client requirements, project brief and nature of the space</p> <p>3.6. Feedback and follow up is instigated and maintained with the client</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collecting, organising and understanding information related to work briefs, basic plans and safety procedures
- communicating ideas and information
- accurately recording and maintaining information
- using computer operations for internet access and searches
- analysing performance characteristics
- comparing findings
- developing visual communication tools
- maintaining accurate records
- clarifying and checking task-related information
- carrying out work according to OHS practices
- recognising and responding to circumstances outside instructions or personal competence
- efficiently and safely contributing to innovative interior decoration and design processes
- using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- maintaining current knowledge of interior decoration and design techniques
- using the workplace technology related to the use of tools including calculators, measuring and recording devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for researching and recommending artwork
- organisational and site standards, requirements, policies and procedures for researching and recommending artwork
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- artwork types and styles
- design themes and design development
- colours, furnishings and decorations
- sketching and drawing
- procedures for the recording, reporting and maintenance of workplace records and

REQUIRED SKILLS AND KNOWLEDGE

information

- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively research and recommend artwork to assist with informing the design and decoration process and arrive at a solution which meets client requirements • Effectively apply design elements and principles to the research and recommendation of artwork • Effectively research and recommend artwork in accordance with the project brief • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for researching and recommending artwork • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to researching and recommending artwork • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of

EVIDENCE GUIDE	
	<p>tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none"> • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Project brief

- may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target

RANGE STATEMENT	
	market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Aesthetics	<ul style="list-style-type: none"> may include but not be limited to the consideration of appeal to a large number of people; products are pleasing to the eye of many who view it
Artwork	<ul style="list-style-type: none"> may include but not be limited to gothic, Byzantine, early renaissance, high renaissance, northern renaissance, mannerism, baroque, rococo, neoclassicism, academic, Japanese Ukiyo-e, romanticism, the Hudson river school, the pre-Raphaelite brotherhood, Victorian classicism, the arts and crafts movement, symbolism, realism, the Barbizon school, impressionism, post-impressionism, les Nabis, pointillism, fauvism, 19th century arts and crafts, art nouveau, the golden age of illustration, art deco, ashcan school, Camden town group, American scene, American regionalism, social realism, the Canadian group of seven, magic realism, contemporary

RANGE STATEMENT	
	realism, modernism, expressionism, die Brucke, der blaue reiter, die neue sachlichkeit, Bauhaus, cubism, dada, futurism, neo-plasticism, surrealism, precisionism, the Harlem renaissance, abstract expressionism, pop art, op art, arte Provera, photorealism, minimalism, the sensation show and folk art
Framing	<ul style="list-style-type: none"> may include but not be limited to mouldings of solid timber, composites, metal and alloy extrusion and synthetics
Properties	<ul style="list-style-type: none"> may include but not be limited to durability, level of fire retardancy, composition, textile use, material use, finishes, quality, environmental sustainability, flammability, maintenance requirements, wear and tear and production methods
Materials	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles (wool, cotton, polyester, silk, nylon and blends), fibreglass, foam, cardboard, paper products, paints, finishes or any other manipulable substance
Manufacturing process	<ul style="list-style-type: none"> may include but not be limited to the methods by which the product will be produced, these steps usually entail working from working drawings and specifications, producing components utilising machine operations, assembly of the components and finishing techniques
Environmental impact	<ul style="list-style-type: none"> may include but not be limited to how the sourcing and use of materials effects the environment and how its continued use will effect the area the material was sourced from, energy consumption in processing the material, greenhouse gases created, waste levels and resource utilisation. Similarly what impact will be felt by reducing or stopping use of the material
Longevity and restorability	<ul style="list-style-type: none"> may include but not be limited to an analysis of how long the material is expected to maintain its structure and colour, while maintaining quality of aesthetic value and how readily the material can be repaired or

RANGE STATEMENT	
	replaced
Commissioned	<ul style="list-style-type: none"> may include but not be limited to the contracting of an artist for the purposes of producing an art piece to specified requirements or a style
Qualities	<ul style="list-style-type: none"> may include but not be limited to an inspection system for ensuring that pre-determined quality standards are being met, highlighting non-conformances requiring intervention
Performance and characteristics	<ul style="list-style-type: none"> may include but not be limited to assessment of products to determine if they meet the requirements of the intended end use application and how well they do it, the durability and composition of the product
Costs	<ul style="list-style-type: none"> may include but not be limited to the cost of products and materials together with the cost of obtaining them either locally, interstate or overseas
Quote	<ul style="list-style-type: none"> may include but not be limited to a price for a project taking account of the sizes associated with the project, the cost of materials, labour and overheads

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID5013A Design for small to medium scale commercial or institutional interiors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the knowledge and skills required to apply researched information to formulate creative and complex design solutions to a range of small to medium scale commercial or institutional interior design situations satisfying the physiological, psychological, social, cultural and environmental requirements of the brief.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to design spaces for small to medium commercial or institutional interiors.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the design process. Planning and organising and problem solving skills are required to apply design processes and initiative and enterprise are required to develop design ideas. Self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse the project brief	1.1. Applicable OHS, legislative and organisational requirements relevant to designing for commercial or institutional spaces are verified and complied with 1.2. Project brief is reviewed, confirmed and clarified with client 1.3. Key requirements for the project are assessed and confirmed and constraints determined 1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness 1.5. Communication with others is established and maintained 1.6. Relevant research is conducted to gain all information which may be used to inform the design process 1.7. All required information is accessed and interpreted to inform the design process
2. Conduct project research	2.1. Site analysis is conducted to assess the requirements of the spaces requiring work 2.2. Intended function of the space is ascertained from the client 2.3. Contextual information relating to the brief is researched and evaluated 2.4. Functional and planning issues are determined specific to the site and client requirements 2.5. Research material is organised and presented in the form of a design proposal 2.6. Project is planned to make effective use of time and available resources
3. Develop design concepts	3.1. Multiple ideas and concepts are generated in a creative and diverse manner that is sympathetic to the design brief 3.2. Concepts are presented through sketches, mood boards, concept boards and concept models 3.3. Viability of concepts are assessed in conjunction with others 3.4. Environmental implications of the project are assessed and design concepts reviewed to ensure maximum energy efficiency is achieved in solution 3.5. Access issues relating the project are identified and

ELEMENT	PERFORMANCE CRITERIA
	addressed in design solution
4. Design the space	<p>4.1. Ideas are translated into 3-D space satisfying functional criteria</p> <p>4.2. Evidence of 3-D notions are explored through modelling</p> <p>4.3. Idea with the greatest potential for success is presented to promote the design's acceptance using both 2-D and 3-D representations</p> <p>4.4. Client feedback is sought, amendments are agreed to and recorded, and ideas are revised and refined</p> <p>4.5. A materials palette is selected to enhance spatial ideas</p> <p>4.6. Design is modified in response to critical feedback without losing integrity of the design intention</p>
5. Revise and refine solution	<p>5.1. Ergonomic and anthropometric principles are assessed in respect to the space and the intended products</p> <p>5.2. Spatial planning is further revised and resolved in response to client feedback</p> <p>5.3. Materials, colours, finishes, fixtures and fittings are selected appropriate to the concept and brief parameters</p> <p>5.4. Feedback is received through consultation with the client and incorporated into design solution</p>
6. Prepare a fully rendered client presentation	<p>6.1. Resource requirements are identified for presentation</p> <p>6.2. Final design solution is communicated effectively and creatively using a range of techniques and media</p> <p>6.3. Documentation drawings and material selections are prepared that are consistent with, and that best communicate, the design intent</p> <p>6.4. Work is completed to plan and within brief constraints</p> <p>6.5. Client feedback and response is analysed to determine success in achieving client satisfaction</p> <p>6.6. Own performance in the design process is examined to identify strengths and weaknesses</p> <p>6.7. Areas for improvement are identified</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- applying principles and elements of design
- communicating design concepts
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- drawing using manual and computer based techniques
- sequencing operations
- meeting specifications
- computer aided design techniques
- clarifying and checking taskrelated information
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for designing for commercial or institutional space
- organisational and site standards, requirements, policies and procedures for designing for commercial or institutional space
- Australian Standards and the Building Code of Australia relating to commercial or institutional interior design
- environmental protection requirements relating to commercial or institutional interior design
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- design themes and design development
- colours, furnishings and decorations
- sketching and drawing to architectural drawing standards
- procedures for the recording, reporting and maintenance of workplace records and

REQUIRED SKILLS AND KNOWLEDGE

information

- | |
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| <ul style="list-style-type: none">• appropriate mathematical procedures for estimation and measurement |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively design for at least two interior small to medium scale commercial or institutional spaces to provide the client with creative solutions that satisfy the design brief • Effectively apply design elements and principles in designing for commercial space • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for designing for commercial space • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to designing for small to medium commercial spaces • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and

EVIDENCE GUIDE	
	<p>application</p> <ul style="list-style-type: none"> • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Project brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target

RANGE STATEMENT	
	market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Relevant research	<ul style="list-style-type: none"> may include but not be limited to similar products and typologies, materials, social and cultural influences, site analysis, site conditions and functional requirements
Information	<ul style="list-style-type: none"> may include but not be limited to lifestyle requirements, cultural issues, ergonomics, anthropometrics, proxemics, costs, product performance and characteristics, and existing conditions
Site analysis	<ul style="list-style-type: none"> may include but not be limited to a visit to the site to achieve a feel for the intention of the project brief and how services may be affected by it, identifying constraints of site and recording information and taking photos
Creative methodologies	<ul style="list-style-type: none"> may include but not be limited to brainstorming, word association, imaging, modelling, lateral thinking, application of a range of media
Concept presentation methods	<ul style="list-style-type: none"> may include but not be limited to mood board, concept board, 3-D models, sketches, photos
Environmental implications	<ul style="list-style-type: none"> may include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will

RANGE STATEMENT	
	effect the area it has been sourced from, energy consumption in achieving the material, greenhouse gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source
Materials	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Colours	<ul style="list-style-type: none"> may include but not be limited to colour principles, psychology, fundamentals, coordination, perception, contrast, harmony, effects on space, formulas and colour wheels
Finishes	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass textiles and other textures
Fixtures and fittings	<ul style="list-style-type: none"> may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built in cabinetry or fittings, light fittings, lamps and picture framing may also include but not be limited to accessories such as trinkets, ceramics, trays, vases, carvings, baskets, pots, plants, candles, clocks, silverware, mirrors, frames, screens, floral displays, haberdashery, glassware, fireplace items, gifts, hand crafts, water features, photographs, pottery, personal items, statues, book ends, bowls and bottles
Drawings	<ul style="list-style-type: none"> may include but not be limited to drafted technical drawings or drawings produced on computer using CAD software packages to architectural standards. These contain project specifications may also include but not be limited to elevations, sections, plans and perspectives

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID5014A Use CAD applications to complete models and documentation for interior design projects

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to use computer aided drafting (CAD) applications to produce models and documentation for interior decoration and design projects to meet client and project brief requirements.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in interior decoration and design operations of all sizes. It applies to the development of 2-D and 3-D drawings that incorporate all standard practice notations and drawing protocols.</p> <p>This unit requires employability skills in initiative and enterprise, planning and organising and problem solving in order to determine drawing specifications to meet design brief requirements. Communication skills are used to interpret and document design information and complete drawings. Self management and learning skills are applied to gain additional information to support drawing design skills.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine project requirements	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational requirements</i> relevant to designing with CAD applications are verified and complied with</p> <p>1.2. <i>Project brief</i> is reviewed and confirmed</p> <p>1.3. <i>Parameters</i> for the project are assessed and confirmed</p> <p>1.4. Design concepts and <i>details of design solution</i> are examined to determine drawing requirements</p> <p>1.5. Sketches, drawings and materials board are analysed</p> <p>1.6. Calculations and measurements are confirmed</p> <p>1.7. <i>Documentation requirements</i> for the design are clarified and confirmed</p> <p>1.8. Computing equipment and suitable software is selected and prepared for use</p> <p>1.9. Customised template created for individual workplace</p>
2. Use CAD applications to produce 3D model and documentation	<p>2.1. <i>Layering</i> strategy for project is designed, created and applied</p> <p>2.2. <i>Architectural library</i> is developed to acquire relevant design components</p> <p>2.3. Custom designed library parts are created</p> <p>2.4. Text, line, font and dimension styles are applied</p> <p>2.5. <i>Pan, zoom and orbit tools</i> are used to navigate in the 2-D and 3-D windows within the model</p> <p>2.6. Text and notations are added to the drawing in accordance with <i>drawing protocols</i></p> <p>2.7. Dimensions are added to the drawing in accordance with drawing protocols</p> <p>2.8. 3-D detailed suite of rooms, complete with fenestration and doors is produced on appropriate layers</p> <p>2.9. Advanced features of drawing tools are used to generate 3-D form</p>
3. Edit drawing components	<p>3.1. <i>Editing tools</i> are used to modify drawing elements and text</p> <p>3.2. Object properties are modified changed or transferred to a different layer</p>
4. Render surfaces	<p>4.1. Library is used to assign materials to surfaces and objects of the model</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>4.2. New material creations are explored</p> <p>4.3. Texture, transparency, luminescence and patterns are edited to achieve desired surface effects using shader settings</p> <p>4.4. Light fixtures are included in model and parameters adjusted to achieve desired effects</p>
<p>5. Create 3-D views of the model</p>	<p>5.1. Isometric, two and three point perspective views are created using a range of camera settings and rendering techniques</p> <p>5.2. Camera or target is repositioned to provide alternate views using a variety of camera techniques</p> <p>5.3. Effect of natural and artificial lighting are created in 3-D space to achieve photo realistic awareness of the 3-D model and the effect of light on surfaces</p> <p>5.4. Rendering time considerations are examined to achieve specific output</p>
<p>6. Plot and print for final presentations</p>	<p>6.1. Perspective views are saved and are appropriate for final media presentation</p> <p>6.2. Appropriate views are saved to meet requirements of brief</p> <p>6.3. Page layout is created for plotting and printing</p> <p>6.4. Page layout is prepared using saved views and documentation</p> <p>6.5. 2-D documentation is plotted with appropriate line weights</p> <p>6.6. Slide show presentation is prepared using saved views and documentation</p>
<p>7. Save and back up files</p>	<p>7.1. Folders and files are created to store drawing projects</p> <p>7.2. Drawings are saved and filed to allow easy access according to workplace documentation system</p> <p>7.3. Appropriate techniques for reducing file size are identified and compared</p> <p>7.4. Copies of files are backed up</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicating ideas and information to enable confirmation of work requirements and specifications
- reading and interpreting workplace documents
- using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- applying attention to detail
- applying design concepts to drawings
- efficiently and safely contributing to innovative interior decoration and design processes
- planning own work within the given task parameters
- accepting responsibility for given tasks
- maintaining current knowledge of tools and materials
- maintaining current knowledge of interior decoration and design techniques
- using the workplace technology related to the use of tools including calculators, measuring and recording devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for using CAD applications
- organisational and site standards, requirements, policies and procedures for using CAD applications
- elements and principles of design
- types of CAD equipment and procedures for their safe use, operation and maintenance
- computer programs and CAD applications
- drafting and drawing codes and practices relevant to interior design
- 2-D and 3-D drawing techniques
- appropriate mathematical procedures for estimation and measurement
- documentation control procedures
- problem identification and resolution techniques

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively design and produce at least two 2-D CAD drawings and two 3-D CAD drawings that document the requirements of the design brief • Apply drafting and drawing protocols in accordance with Australian Standards and the Building Code of Australia • Effectively apply design elements and principles to designing with CAD applications • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures to design with CAD applications • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to designing with CAD applications • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of

EVIDENCE GUIDE	
	<p>tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Project brief

- may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones for the design project, organisational or personal profiles and aims, image requirements and

RANGE STATEMENT	
	function, target market, budget, timeline and consultation requirements
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Details of design solution	<ul style="list-style-type: none"> may include but not be limited to products, materials, fixtures and finishes, dimensions, features, openings, furnishings and accessories, colour, effects and lighting and electrical sources
Documentation requirements	<ul style="list-style-type: none"> may include but not be limited to site plans, floor plans, sections, elevations, projections, general notes, construction notes, area analysis, services, structures, location, neighbouring buildings and any other space or area addressed by interior designers
Layering	<ul style="list-style-type: none"> may include but not be limited to the use of different overlays to portray a range of applications including architectural, civil, electrical, fire protection, general, landscaping, mechanical, plumbing, equipment or furnishings, structural and telecommunications
Architectural library	<ul style="list-style-type: none"> may include but not be limited to a catalogued reference of interior decoration and design components which can be uploaded into a model
Pan, zoom and orbit tools	<ul style="list-style-type: none"> may include but not be limited to procedures for moving around the window and the ability to look closer or more broadly at certain components
Drawing protocols	<ul style="list-style-type: none"> may include but not be limited to commonly used symbols, lettering standards, standard units of measurement, paper size, scale, numbering, legends and abbreviations
Editing tools	<ul style="list-style-type: none"> may include but not be limited to tools which enable changing of components, sections, text or measurements on a model
Rendering time considerations	<ul style="list-style-type: none"> may include but not be limited to global settings, quality settings and impact on rendering times, and specific rendering quality issues

RANGE STATEMENT	
Appropriate views	<ul style="list-style-type: none"> may include but not be limited to sectional views, internal and external elevations, removal of wire frames and hidden lines, and use of desired output settings

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID5015A Decorate interiors for restoration projects

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skill and knowledge required to specify interior decoration solutions for restoration projects.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to analyse the project brief, conduct research and develop solutions for the decoration of interiors according to the conservation and heritage requirements of the building style and era.</p> <p>This unit does not cover skills required for interior designs that require changes to established structural aspects of the building or to building services.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the design process. Planning and organising and problem solving skills are required to apply design processes and initiative and enterprise are required to develop to design ideas. Self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse the project brief	1.1. Applicable OHS, legislative and organisational requirements relevant to decorating for residential spaces are verified and complied with 1.2. Project brief is reviewed, confirmed and clarified with client 1.3. Parameters for the project are assessed and confirmed 1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness 1.5. Communication with others is established and maintained 1.6. Problems or underlying factors to be addressed by the project brief are verified
2. Conduct research on decoration requirements	2.1. Site analysis is conducted to assess the requirements of the spaces requiring decoration 2.2. Intended function of the space is ascertained from the client or project brief 2.3. Style, era, theme and feature of the site are identified 2.4. Issues relating to the conservation and heritage environment are identified and their implications for the project determined 2.5. Environmental issues are identified and analysed 2.6. Areas for research are identified to inform the decoration process 2.7. Collected information is documented
3. Generate decoration solution	3.1. Decoration concepts are generated and assessed against restoration requirements 3.2. Decoration treatments are selected according to the needs of the restoration style and era 3.3. Regulatory requirements relating to decoration are assessed to determine compliance 3.4. Environmental aspects of decoration solution are examined and areas for improved sustainability are identified and incorporated where possible 3.5. Conceptual approach is developed and clearly defined 3.6. Concept is presented to client using a range of concept presentation methods 3.7. Ideas are discussed with client and feedback received

ELEMENT	PERFORMANCE CRITERIA
	<p>and analysed</p> <p>3.8. Concept is modified according to feedback</p> <p>3.9. Agreement on the concept is gained from the client</p>
4. Prepare client presentation	<p>4.1. Preliminary <i>drawings</i> are developed with decoration treatment inclusions and positioning</p> <p>4.2. Final decoration solution is communicated effectively and creatively using a range of techniques and media</p> <p>4.3. Work is completed to plan and within restoration brief constraints</p> <p>4.4. Client feedback and response is analysed to determine success in achieving client satisfaction</p> <p>4.5. Own performance in the decoration process is examined to identify strengths and weaknesses</p> <p>4.6. Areas for improvement are identified</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- preparing and presenting research information
- collecting, organising and understanding information
- communicating ideas and information
- presenting ideas visually
- accurately recording and maintaining information relating to the project
- working and communicating with others to gain information
- recognising and responding to circumstances outside instructions or personal competence
- efficiently and safely contributing to restoration process
- planning own work within the given task parameters
- maintaining current knowledge of tools and materials
- maintaining current knowledge of decoration techniques
- applying principles and elements of design
- communicating decoration concepts
- documenting and transferring information
- drawing using manual and computer based techniques
- sequencing operations
- meeting specifications
- carrying out work according to OHS practices in the workplace or realistically simulated workplace

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for decorating for restoration projects
- organisational and site standards, requirements, policies and procedures for decorating residential spaces
- Australian Standards and the Building Code of Australia
- the Burra Charter, the Australia ICOMOS charter for places of cultural significance, 1999
- environmental protection requirements
- features of architectural styles and eras
- problem identification and resolution
- elements and principles of design
- ergonomics, anthropometrics, proxemics and aesthetic values
- historical design styles and movements
- techniques for the preparation and presentation of research information

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• characteristics of decoration materials, products and defects• computer programs• sketching and drawing techniques• appropriate mathematical procedures for estimation and measurement |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively analyse a project brief to determine client requirements • Conduct research to determine decoration requirements for restoration project • Effectively determine decoration solution for at least two restoration projects • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for decorating for restoration projects • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to decorating interiors for restoration projects • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and

EVIDENCE GUIDE	
	<p>application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Project brief

- may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target

RANGE STATEMENT	
	market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes, effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, Computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Site analysis	<ul style="list-style-type: none"> may include but not be limited to a visit to the site to achieve a feel for the intention of the project brief and how services may be affected by it, identifying constraints of site and recording information, taking measurements and taking photos
Issues relating to the conservation and heritage environment	<ul style="list-style-type: none"> may include but not be limited to building standards, safety standards, guidelines relating to the specific commercial use, size, access, flexibility of structural changes, decision making processes, electricity supply, services available, building conditions, other occupancy, lease conditions, conservation orders and conditions, compatibility and matching of new and old materials and protection and conservation of features
Environmental issues	<ul style="list-style-type: none"> may include but not be limited to use of renewable resources, energy efficiency, conservation of resources, recycling, waste,

RANGE STATEMENT	
	by-products, emissions and environmental consciousness/green design
Areas for research	<ul style="list-style-type: none"> may include but not be limited to products and typologies of the style and era, materials used in architecture of the style and era, social and cultural influences, site conditions and functional requirements
Documentation	<ul style="list-style-type: none"> may include but not be limited to working notes, hand written records, typed information and reports, diagrams, sketches, tables, matrixes, images and visual essays
Decoration treatments	<ul style="list-style-type: none"> may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, bed covers, built in cabinetry or fittings, light fittings, lamps and picture framing may include accessories such as trinkets, ceramics, trays, vases, carvings, baskets, pots, plants, candles, clocks, silverware, mirrors, frames, screens, floral displays, haberdashery, glassware, fireplace items, gifts, hand crafts, water features, photographs, pottery, personal items, statues, book ends, bowls and bottles may include materials such as solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance may include finishes such as paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures may also include colours and effects
Environmental aspects	<ul style="list-style-type: none"> may include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will effect the area it has been sourced from, energy consumption in achieving the material, green house gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source
Concept presentation methods	<ul style="list-style-type: none"> may include but not be limited to fully rendered 3-D CAD drawings, mood boards,

RANGE STATEMENT	
	concept boards, 3-D models, sketches, photos
Drawings	<ul style="list-style-type: none"> • may include but not be limited to hand drawn images or ideation drawings completed freehand drafted technical drawings or drawings produced on computer using CAD software packages. These usually contain project specifications • may also include elevations, sections, plans, perspectives

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID6001A Resolve complex spatial design problems through modelling

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to successfully use a range modelling techniques for extending, developing and resolving complex spatial design problems.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to develop and refine a conceptual model, inform design work through experimentation with a range of spatial modelling techniques, determine, manage and organise resource requirements for new work and realise a fully resolved interior scheme through modelling.</p> <p>This unit covers employability skills in initiative and enterprise and problem solving to apply design principles to modelling in order to meet brief requirements. Communication skills are used to convey design solution and self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Adapt and develop concepts as a result of design research	1.1. Criteria are established that are most likely to facilitate the achievement of the conceptual vision 1.2. Consultation is conducted with colleagues to develop conceptual thinking approaches 1.3. A range of <i>spatial problems</i> are examined to determine suitable approaches 1.4. Relevant ideas and approaches are researched, adapted and incorporated from other practitioners
2. Visualise design concepts using a range of modelling techniques	2.1. Capabilities of a range of 2-D conceptual notions are extended through 3-D modelling 2.2. The conceptual vision is refined based on ongoing experimentation using sophisticated modelling techniques 2.3. A sophisticated concept model appropriate to the brief is presented to the client and feedback evaluated
3. Manage and organise resource requirements for new work	3.1. Materials, tools, equipment and computer aided design applications are researched for the achievement of different 3-D effects 3.2. Resource requirements that arise from the use of techniques and experimental approaches are determined and organised for new work 3.3. Critical path is determined, projecting completion dates of each stage of the project
4. Develop extend and resolve spatial ideas through modelling	4.1. Experimentation is undertaken with a range of modelling techniques to explore and develop complex 3-D notions 4.2. <i>Design elements and principles</i> are applied and manipulated to assist in design development 4.3. Scale, volume and proportion are explored and manipulated as part of a design development process 4.4. A range of models are developed by hand or using computer aided design applications to revise and refine spatial ideas
5. Present a fully resolved interior space using sophisticated modelling techniques	5.1. Modelling technique is selected to meet the established criteria 5.2. Appropriate scale is selected to meet brief criteria 5.3. Resolved spatial ideas are accurately represented to scale 5.4. Materials and textures are accurately represented to

ELEMENT	PERFORMANCE CRITERIA
	scale 5.5. Construction, detailing and finishes are resolved and demonstrated through sophisticated modelling 5.6. Detailed model is presented to client and feedback evaluated

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- establishing a personal work methodology
- visualising 2-D notions into 3-D space and form
- ability to manipulate a range of computer software programs
- critical evaluation skills
- group interaction and teamwork skills
- creativity
- innovation
- research skills
- independent thinking
- ability to assess suitable process
- ability to experiment in both the planning of projects and methods of execution
- presenting design ideas
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for modelling
- organisational and site standards, requirements, policies and procedures for modelling
- elements and principles of design
- spatial concepts
- concept modelling techniques
- mass modelling techniques
- detailed modelling techniques
- model making techniques
- 3-D visualisation techniques such as computer modelling
- white models
- maquettes
- scale
- proportion
- proportioning systems
- structures
- modular systems and repeats
- advanced 3-D geometry
- evidence of design process and progression of ideas
- environmental protection considerations for interior design

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• established communication channels and protocols• problem identification and resolution techniques• design communication techniques |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Use, apply and experiment with modelling techniques to explore a design solution • Apply individual creativity to modelling • Fully resolve a final design solution using modelling techniques • Apply design elements and principles to models • Communicate design ideas through development of models
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to resolving complex spatial design problems through modelling • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related

EVIDENCE GUIDE	
	<p>conditions (real or simulated) and require evidence of process</p> <ul style="list-style-type: none"> • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Spatial problems	<ul style="list-style-type: none"> • may include but not be limited to voids, apertures, thresholds, atriums, vertical and horizontal circulation systems, public spaces, multi-level spaces, mezzanines, transitional spaces, staircases and ceiling planes
Design elements and principles	<ul style="list-style-type: none"> • may include but not be limited to balance, similarity, texture, contrast, size, ground, volume, composition, orientation, form, structure, 2-D space, position, proportion, 3-D space, repetition, scale, line, rhythm, pattern, point, symmetry, tone and plane

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID6002A Apply 3-D visualisation techniques to represent interior designs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to use 3-D computer visualisation techniques to represent designs for interior environments.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to use computer program applications commonly used to create 3-D visualisation representations for interior designs.</p> <p>This unit covers employability skills in communication, planning and organising and problem solving in order to determine and apply visualisation techniques to develop representations of design ideas. Computing technology is widely used in this competency. Self management and learning skills are applied to assess and reflect on own skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		
	<i>LMFID5014A</i>	<i>Use CAD applications to complete models and</i>

Prerequisite units		
		<i>documentation for interior design projects</i>

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse project	<p>1.1. Applicable OHS, legislative and organisational requirements relevant to producing visual representations are verified and complied with</p> <p>1.2. Project brief is reviewed, confirmed and clarified with client</p> <p>1.3. Parameters for the project are assessed and confirmed</p> <p>1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness</p> <p>1.5. Communication with relevant personnel is established and maintained as required</p>
2. Select rendering application	<p>2.1. Features of rendering software packages used in interior design and decoration visualisations are identified and uses determined</p> <p>2.2. Rendering requirements are determined from project documentation</p> <p>2.3. Rendering software with capability to achieve desired effects within the project time frame and budget is selected</p> <p>2.4. Equipment and media is assessed as suitable for software and the achievement of desired effects</p> <p>2.5. Planning tasks are undertaken to prepare for rendering</p>
3. Apply rendering functions	<p>3.1. Image resolutions are selected and applied to meet project requirements</p> <p>3.2. Image aspect ratio is selected and applied</p> <p>3.3. Pixel ratio is selected and applied</p> <p>3.4. Renderer attributes are adjusted to obtain desired visual effects</p>
4. Check render integrity and quality	<p>4.1. Render integrity is tested and refined</p> <p>4.2. Missing images and textures are identified and re-linked as required</p> <p>4.3. Render times for optimising process are tested</p> <p>4.4. Alpha channels and opacity matts are tested</p> <p>4.5. Render layers and passes are tested</p>
5. Optimise images for render processes	<p>5.1. All relevant pre-rendering optimisations tasks are completed</p> <p>5.2. Renderer attributes are adjusted and refined to</p>

ELEMENT	PERFORMANCE CRITERIA
	optimise render time 5.3. Appropriate <i>file output format</i> is selected 5.4. Appropriate file names and output destinations are selected
6. Render image	6.1. Final rendering processes are undertaken and completed 6.2. Files are stored and archived 6.3. Completed render is reviewed to ensure compliance with system and client requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- applying principles and elements of design
- communicating design concepts
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- interpreting a design brief
- scheduling production components
- building models to scale
- creating effects such as lighting, shading, rendering and texturing using software programs
- using networks
- time management skills
- clarifying and checking taskrelated information
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for rendering processes
- organisational and site standards, requirements, policies and procedures for rendering
- elements and principles of design
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- design themes and design development
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively design and apply rendering tasks • Use and refine render components for best performance • Store rendered components in a organised manner for further use • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to producing digital presentations for interior design projects • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Project brief

- may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target

RANGE STATEMENT	
	market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Relevant personnel	<ul style="list-style-type: none"> may include but not be limited to interior designer, modeller, texture, animator, programmer, technical director and systems support officer
Rendering software packages	<ul style="list-style-type: none"> may include but not be limited to AutoCAD, AutoCAD Revit 9, 3D Studio Max, Form Z, Animator Pro, Rhino, Photoshop, Illustrator and CorelDraw
Rendering	<ul style="list-style-type: none"> may include but not be limited to the pictorial representation of plans and elevations using colours, highlighting and shading to provide depth and photo-like drawings
Equipment and media	<ul style="list-style-type: none"> may include but not be limited to computer workstation, ergonomic furniture, 3-D animation software, rendering software, render network distribution software, hubs, switches, input device (e.g. stylist tablet, keyboard, mouse), output device (e.g.

RANGE STATEMENT	
	monitor, TV, printer, speakers) and render farm
Planning tasks	<ul style="list-style-type: none"> may include but not be limited to research, production planning, production management, team discussions, lighting, texturing, shading and networking
Pre-rendering optimisation tasks	<ul style="list-style-type: none"> may include but not be limited to selection of most appropriate renderer for specific outcome, assessing options with key personnel, deleting any unnecessary geometry and components, preparing renderer attributes, preparing layer or pass control, preparing opacity mattes and alpha channels, testing and diagnosing rendering issues, optimising and refining for best render performance, rendering and organisation of output
File output format	<ul style="list-style-type: none"> may include but not be limited to TIFF

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID6003A Design for large scale commercial or institutional interiors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the knowledge and skills required to apply researched information to formulate creative and complex design solutions to large scale commercial or institutional interior design situations satisfying the physiological, psychological, social, cultural, technical and environmental requirements of the brief.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to design spaces for large scale, multiple use, multi-themed commercial or institutional spaces such as office buildings, hospitals, apartment buildings, public spaces and exhibition or conference centres.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the design process. Planning and organising and problem solving skills are required to apply design processes and initiative and enterprise are required to develop design ideas. Computer aided design technologies will be used. Self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse the project brief	<p>1.1. Applicable OHS, legislative and organisational requirements relevant to designing for large scale commercial or institutional spaces are verified and complied with</p> <p>1.2. Project brief is reviewed, confirmed and clarified with client</p> <p>1.3. Key requirements for the project are assessed and confirmed and constraints determined</p> <p>1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness</p> <p>1.5. Communication with others in the design project is established and maintained</p> <p>1.6. Relevant research is conducted to gain all information which may be used to inform the design process</p> <p>1.7. All required information is accessed and interpreted to inform the design process</p>
2. Conduct project research	<p>2.1. Site analysis is conducted to assess the requirements of the spaces requiring work</p> <p>2.2. Intended function of the space is ascertained from the client</p> <p>2.3. Contextual information relating to the brief is researched and evaluated</p> <p>2.4. Functional and planning issues are determined specific to the site and client requirements</p> <p>2.5. Issues relating to the commercial or institutional environment are identified and their implications for the design project determined</p> <p>2.6. Research material is organised and presented in the form of a design proposal</p> <p>2.7. Project is planned to make effective use of time and available resources</p>
3. Develop design concepts	<p>3.1. Multiple ideas and concepts are generated in a creative and diverse manner that is sympathetic to the design brief</p> <p>3.2. Concepts are presented through sketches, mood boards, concept boards and concept models</p> <p>3.3. Viability of concepts are assessed in conjunction with others</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.4. <i>Environmental aspects</i> of the project are assessed and design concepts reviewed to ensure maximum energy efficiency achieved in solution</p> <p>3.5. Access issues relating the project are identified and addressed in design solution</p>
4. Design the space	<p>4.1. Ideas are translated into 3-D space satisfying functional criteria</p> <p>4.2. Evidence of 3-D notions are explored through modelling</p> <p>4.3. Idea with the greatest potential for success is presented to promote the design's acceptance using both 2-D and 3-D representations</p> <p>4.4. Client feedback is sought, amendments are agreed to and recorded, and ideas are revised and refined</p> <p>4.5. A materials palette is selected to enhance spatial ideas</p> <p>4.6. Design is modified in response to critical feedback without losing integrity of the design intention</p>
5. Revise and refine solution	<p>5.1. Ergonomic and anthropometric principles are assessed in respect to the space and the intended products</p> <p>5.2. Spatial planning is further revised and resolved in response to client feedback</p> <p>5.3. <i>Materials, colours, finishes, fixtures and fittings</i> are selected appropriate to the concept and brief parameters</p> <p>5.4. Feedback is received through consultation with the client and incorporated into design solution</p>
6. Prepare a fully rendered client presentation	<p>6.1. Resource requirements are identified for presentation</p> <p>6.2. Final design solution is communicated effectively and creatively using a range of techniques and media</p> <p>6.3. Documentation <i>drawings</i> and material selections are prepared that are consistent with, and that best communicate, the design intent</p> <p>6.4. Work is completed to plan and within brief constraints</p> <p>6.5. Client feedback and response is analysed to determine success in achieving client satisfaction</p> <p>6.6. Own performance in the design process is examined to identify strengths and weaknesses</p> <p>6.7. Areas for improvement are identified</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- applying principles and elements of design
- communicating design concepts
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- drawing using manual and computer based techniques
- sequencing operations
- meeting specifications
- computer aided design techniques
- clarifying and checking taskrelated information
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for designing for commercial or institutional space
- organisational and site standards, requirements, policies and procedures for designing for commercial or institutional space
- Australian Standards and the Building Code of Australia
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- design themes and design development
- colours, furnishings and decorations
- sketching and drawing to architectural drawing standards
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• regulations, conditions and variables relating to the specific commercial context |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively design for a multi-purpose large scale commercial or institutional space to provide the client with creative solutions that satisfy the design brief • Effectively apply design elements and principles in designing for large scale commercial or institutional space • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for designing for large scale commercial or institutional space • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to designing for large scale commercial or institutional interiors • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of

EVIDENCE GUIDE	
	<p>tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none"> • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Large scale commercial or institutional spaces

- may include but not be limited to multiple use, multi-themed commercial or institutional spaces such as office buildings, institutions, apartment buildings, public spaces, exhibitions spaces or conference centres

RANGE STATEMENT	
Project brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Relevant research	<ul style="list-style-type: none"> may include but not be limited to similar products and typologies, materials, social and cultural influences, site analysis, site conditions, functional requirements and commercial or institutional application
Information	<ul style="list-style-type: none"> may include but not be limited to usage requirements, building and service plans, ergonomics, anthropometrics, proxemics, costs, product performance and characteristics, and existing conditions
Site analysis	<ul style="list-style-type: none"> may include but not be limited to a visit to the site to achieve a feel for the intention of the project brief and how services may be affected by it, identifying constraints of site and recording information, taking measurements and taking photos
Issues relating to the commercial or institutional environment	<ul style="list-style-type: none"> may include but not be limited to building standards, safety standards, guidelines relating to the specific commercial or institutional use,

RANGE STATEMENT	
	size, access, flexibility of structural changes, decision making processes, electricity supply, services available, building conditions, other occupancy and lease conditions
Environmental aspects	<ul style="list-style-type: none"> may include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will effect the area it has been sourced from, energy consumption in achieving the material, green house gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source
Materials	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Colours	<ul style="list-style-type: none"> may include but not be limited to colour principles, psychology, fundamentals, coordination, perception, contrast, harmony, effects on space, formulas and colour wheels
Finishes	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures
Fixtures and fittings	<ul style="list-style-type: none"> may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built in cabinetry or fittings, light fittings, lamps and picture framing, office fittings, commercial or institutional applications may also include but not be limited to accessories such as trinkets, ceramics, trays, vases, carvings, baskets, pots, plants, candles, clocks, silverware, mirrors, frames, screens, floral displays, haberdashery, glassware, fireplace items, gifts, hand crafts, water features, photographs, pottery, personal items, statues, book ends, bowls and bottles

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID6004A Design interiors for hospitality environments

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the knowledge and skills required to apply researched information to formulate creative and complex interior design solutions to hospitality environments, satisfying the physiological, psychological, social, cultural and environmental requirements of the brief.</p>
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to design spaces for multi-purpose hospitality environments such as commercial kitchens, bars, restaurants, hotels and function centres.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the design process. Planning and organising and problem solving skills are required to apply design processes and initiative and enterprise are required to develop design ideas. Computer aided design technologies will be used. Self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse the project brief	1.1. Applicable OHS, legislative and organisational requirements relevant to designing for hospitality environments are verified and complied with 1.2. Project brief is reviewed, confirmed and clarified with client 1.3. Key requirements for the project are assessed and confirmed and constraints determined 1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness 1.5. Communication with others in the design project is established and maintained 1.6. Relevant research is conducted to gain all information which may be used to inform the design process 1.7. All required information is accessed and interpreted to inform the design process
2. Conduct project research	2.1. Site analysis is conducted to assess the requirements of the spaces requiring work 2.2. Intended function of the space is ascertained from the client 2.3. Contextual information relating to the brief is researched and evaluated 2.4. Functional and planning issues are determined specific to the site and client requirements 2.5. Issues relating to the hospitality environment are identified and their implications for the design project determined 2.6. Research material is organised and presented in the form of a design proposal 2.7. Project is planned to make effective use of time and available resources
3. Develop design concepts	3.1. Multiple ideas and concepts are generated in a creative and diverse manner that is sympathetic to the design brief 3.2. Concepts are presented through sketches, mood boards, concept boards and concept models 3.3. Viability of concepts are assessed in conjunction with others 3.4. Environmental aspects of the project are assessed

ELEMENT	PERFORMANCE CRITERIA
	<p>and design concepts reviewed to ensure maximum energy efficiency is achieved in solution</p> <p>3.5. Access issues relating the project are identified and addressed in design solution</p>
4. Design the space	<p>4.1. Ideas are translated into 3-D space satisfying functional criteria</p> <p>4.2. Evidence of 3-D notions are explored through modelling</p> <p>4.3. Idea with the greatest potential for success is presented to promote the design's acceptance using both 2-D and 3-D representations</p> <p>4.4. Client feedback is sought, amendments are agreed to and recorded, and ideas are revised and refined</p> <p>4.5. A materials palette is selected to enhance spatial ideas</p> <p>4.6. Design is modified in response to critical feedback without losing integrity of the design intention</p>
5. Revise and refine solution	<p>5.1. Ergonomic and anthropometric principles are assessed in respect to the space and the intended products</p> <p>5.2. Spatial planning is further revised and resolved in response to client feedback</p> <p>5.3. <i>Materials, colours, finishes, fixtures and fittings</i> are selected appropriate to the concept and brief parameters</p> <p>5.4. Feedback is received through consultation with the client and incorporated into design solution</p>
6. Prepare a fully rendered client presentation	<p>6.1. Resource requirements are identified for presentation</p> <p>6.2. Final design solution is communicated effectively and creatively using a range of techniques and media</p> <p>6.3. Documentation <i>drawings</i> and material selections are prepared that are consistent with, and that best communicate, the design intent</p> <p>6.4. Work is completed to plan and within brief constraints</p> <p>6.5. Client feedback and response is analysed to determine success in achieving client satisfaction</p> <p>6.6. Own performance in the design process is examined to identify strengths and weaknesses</p> <p>6.7. Areas for improvement are identified</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- applying principles and elements of design
- communicating design concepts
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- drawing using manual and computer based techniques
- sequencing operations
- meeting specifications
- computer aided design techniques
- clarifying and checking taskrelated information
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for designing for hospitality spaces
- organisational and site standards, requirements, policies and procedures for designing for hospitality spaces
- Australian Standards and the Building Code of Australia
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- design themes and design development
- colours, furnishings and decorations
- sketching and drawing to architectural drawing standards
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- regulations, conditions and variables relating to the specific commercial context

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively design for a multi-purpose hospitality site to provide the client with creative solutions that satisfy the design brief • Effectively apply design elements and principles in designing for hospitality environments • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for designing for hospitality environments • Communicate effectively and work safely with others in the design process
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to designing for hospitality environments • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Hospitality environments

- may include but not be limited to multiple use, multi-themed commercial spaces such as hotels, bars, restaurants, kitchens, entertainment and function centres

RANGE STATEMENT	
Project brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Relevant research	<ul style="list-style-type: none"> may include but not be limited to similar products and typologies, materials, social and cultural influences, site analysis, site conditions, functional requirements and commercial applications
Information	<ul style="list-style-type: none"> may include but not be limited to usage requirements, building and service plans, ergonomics, anthropometrics, proxemics, costs, product performance and characteristics, and existing conditions
Site analysis	<ul style="list-style-type: none"> may include but not be limited to a visit to the site to achieve a feel for the intention of the project brief and how services may be affected by it, identifying constraints of site and recording information, taking measurements and taking photos
Issues relating to the hospitality environment	<ul style="list-style-type: none"> may include but not be limited to building standards, safety standards, guidelines relating to the specific use such as health standards,

RANGE STATEMENT	
	guidelines for traffic flow, public use patterns, occupancy rates, size, access, flexibility of structural changes, decision making processes, electricity supply, services available, building conditions, other occupancy, lease conditions and spatial planning issues
Environmental aspects	<ul style="list-style-type: none"> may include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will effect the area it has been sourced from, energy consumption in achieving the material, greenhouse gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source
Materials	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Colours	<ul style="list-style-type: none"> may include but not be limited to colour principles, psychology, fundamentals, coordination, perception, contrast, harmony, effects on space, formulas and colour wheels
Finishes	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures
Fixtures and fittings	<ul style="list-style-type: none"> may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built in cabinetry or fittings, light fittings, lamps and picture framing, office fittings, commercial applications may also include but not be limited to accessories such as trinkets, ceramics, trays, vases, carvings, baskets, pots, plants, candles, clocks, silverware, mirrors, frames, screens, floral displays, haberdashery, glassware, fireplace items, gifts, hand crafts, water features, photographs, pottery, personal items, statues, book ends, bowls and bottles
Drawings	<ul style="list-style-type: none"> May include but not be limited to hand drawn images or ideation drawings completed freehand, drafted technical drawings or

RANGE STATEMENT	
	drawings produced on computer using CAD software packages. These usually contain project specifications

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID6005A Design for retail interiors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the knowledge and skills required to apply researched information to formulate creative and complex interior design solutions to retail environments, satisfying the physiological, psychological, social, cultural and environmental requirements of the brief.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to design spaces for retail environments such as large department stores or supermarkets.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the design process. Planning and organising and problem solving skills are required to apply design processes and initiative and enterprise are required to develop design ideas. Computer aided design technologies will be used. Self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse the project brief	1.1. Applicable OHS, legislative and organisational requirements relevant to designing for retail environments are verified and complied with 1.2. Project brief is reviewed, confirmed and clarified with client 1.3. Key requirements for the project are assessed and confirmed and constraints determined 1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness 1.5. Communication with others in the design project is established and maintained 1.6. Relevant research is conducted to gain all information which may be used to inform the design process 1.7. All required information is accessed and interpreted to inform the design process
2. Conduct project research	2.1. Site analysis is conducted to assess the requirements of the spaces requiring work 2.2. Intended function of the space is ascertained from the client 2.3. Contextual information relating to the brief is researched and evaluated 2.4. Functional and planning issues are determined specific to the site and client requirements 2.5. Issues relating to the retail environment are identified and their implications for the design project determined 2.6. Research material is organised and presented in the form of a design proposal 2.7. Project is planned to make effective use of time and available resources
3. Develop design concepts	3.1. Multiple ideas and concepts are generated in a creative and diverse manner that is sympathetic to the design brief 3.2. Concepts are presented through sketches, mood boards, concept boards and concept models 3.3. Viability of concepts are assessed in conjunction with others 3.4. Environmental aspects of the project are assessed

ELEMENT	PERFORMANCE CRITERIA
	<p>and design concepts reviewed to ensure maximum energy efficiency is achieved in solution</p> <p>3.5. Access issues relating the project are identified and addressed in design solution</p>
4. Design the space	<p>4.1. Ideas are translated into 3-D space satisfying functional criteria</p> <p>4.2. Evidence of 3-D notions are explored through modelling</p> <p>4.3. Idea with the greatest potential for success is presented to promote the design's acceptance using both 2-D and 3-D representations</p> <p>4.4. Client feedback is sought, amendments are agreed to and recorded, and ideas are revised and refined</p> <p>4.5. A materials palette is selected to enhance spatial ideas</p> <p>4.6. Design is modified in response to critical feedback without losing integrity of the design intention</p>
5. Revise and refine solution	<p>5.1. Ergonomic and anthropometric principles are assessed in respect to the space and the intended products</p> <p>5.2. Spatial planning is further revised and resolved in response to client feedback</p> <p>5.3. <i>Materials, colours, finishes, fixtures and fittings</i> are selected appropriate to the concept and brief parameters</p> <p>5.4. Feedback is received through consultation with the client and incorporated into design solution</p>
6. Prepare a fully rendered client presentation	<p>6.1. Resource requirements are identified for presentation</p> <p>6.2. Final design solution is communicated effectively and creatively using a range of techniques and media</p> <p>6.3. Documentation <i>drawings</i> and material selections are prepared that are consistent with, and that best communicate, the design intent</p> <p>6.4. Work is completed to plan and within brief constraints</p> <p>6.5. Client feedback and response is analysed to determine success in achieving client satisfaction</p> <p>6.6. Own performance in the design process is examined to identify strengths and weaknesses</p> <p>6.7. Areas for improvement are identified</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- applying principles and elements of design
- communicating design concepts
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- drawing using manual and computer based techniques
- sequencing operations
- meeting specifications
- computer aided design techniques
- clarifying and checking taskrelated information
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for designing for retail space
- organisational and site standards, requirements, policies and procedures for designing for retail space
- Australian Standards and the Building Code of Australia
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- design themes and design development
- colours, furnishings and decorations
- sketching and drawing to architectural drawing standards
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- regulations, conditions and variables relating to the specific retail context

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively design for a large retail site to provide the client with creative solutions that satisfy the design brief • Effectively apply design elements and principles in designing for retail environments • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for designing for retail environments • Communicate effectively and work safely with others in the design process
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to designing for retail interiors • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Retail environments	<ul style="list-style-type: none"> may include but not be limited to supermarkets, department stores and specialised chain stores
Project brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and

RANGE STATEMENT	
	criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, retailers
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Relevant research	<ul style="list-style-type: none"> may include but not be limited to similar products and typologies, materials, social and cultural influences, site analysis, site conditions, functional requirements and commercial applications
Information	<ul style="list-style-type: none"> may include but not be limited to usage requirements, building and service plans, ergonomics, anthropometrics, proxemics, costs, product performance and characteristics and existing conditions
Site analysis	<ul style="list-style-type: none"> may include but not be limited to a visit to the site to achieve a feel for the intention of the project brief and how services may be affected by it, identifying constraints of site and recording information, taking measurements and taking photos
Issues relating to the retail environment	<ul style="list-style-type: none"> may include but not be limited to building standards, safety standards, guidelines relating to the specific use such as guidelines for traffic flow, public use patterns, exit routes, size, access, flexibility of structural changes, decision making processes, electricity supply,

RANGE STATEMENT	
	services available, building conditions, other occupancy, lease conditions and spatial planning issues
Environmental aspects	<ul style="list-style-type: none"> may include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will effect the area it has been sourced from, energy consumption in achieving the material, greenhouse gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source
Materials	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Colours	<ul style="list-style-type: none"> may include but not be limited to colour principles, psychology, fundamentals, coordination, perception, contrast, harmony, effects on space, formulas and colour wheels
Finishes	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures
Fixtures and fittings	<ul style="list-style-type: none"> may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built in cabinetry or fittings, light fittings, lamps and picture framing, office fittings, commercial applications may also include but not be limited to accessories such as trinkets, ceramics, trays, vases, carvings, baskets, pots, plants, candles, clocks, silverware, mirrors, frames, screens, floral displays, haberdashery, glassware, fireplace items, gifts, hand crafts, water features, photographs, pottery, personal items, statues, book ends, bowls and bottles
Drawings	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand, drafted technical drawings or drawings produced on computer using CAD software packages. These usually contain project specifications

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID6006A Design for conservation and restoration projects

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the knowledge and skills required to apply researched information to formulate creative and complex design solutions to conservation and restoration projects satisfying the physiological, psychological, social, cultural and environmental requirements of the brief
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required to design spaces for conservation and restoration projects in accordance with heritage style and conservation conditions.</p> <p>This unit covers employability skills in teamwork and communication in order to work with others in the design process. Planning and organising and problem solving skills are required to apply design processes and initiative and enterprise are required to develop design ideas. Computer aided design technologies will be used. Self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse the project brief	1.1. Applicable OHS, legislative and organisational requirements relevant to designing for conservation and heritage projects are verified and complied with 1.2. Project brief is reviewed, confirmed and clarified with client 1.3. Key requirements for the project are assessed and confirmed and constraints determined 1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness 1.5. Communication with others in the design project is established and maintained 1.6. Relevant research is conducted to gain all information which may be used to inform the design process 1.7. All required information is accessed and interpreted to inform the design process
2. Conduct project research	2.1. Site analysis is conducted to assess the requirements of the spaces requiring work 2.2. Intended function of the space is ascertained from the client 2.3. Contextual information relating to the brief is researched and evaluated 2.4. Functional and planning issues are determined specific to the site and client requirements 2.5. Issues relating to the conservation and heritage environment are identified and their implications for the design project determined 2.6. Research material is organised and presented in the form of a design proposal 2.7. Project is planned to make effective use of time and available resources
3. Develop design concepts	3.1. Multiple ideas and concepts are generated in a creative and diverse manner that is sympathetic to the design brief 3.2. Concepts are presented through sketches, mood boards, concept boards and concept models 3.3. Viability of concepts are assessed in conjunction with others 3.4. Environmental aspects of the project are assessed

ELEMENT	PERFORMANCE CRITERIA
	<p>and design concepts reviewed to ensure maximum energy efficiency is achieved in solution</p> <p>3.5. Access issues relating the project are identified and addressed in design solution</p>
4. Design the space	<p>4.1. Ideas are translated into 3-D space satisfying functional criteria</p> <p>4.2. Evidence of 3-D notions are explored through modelling</p> <p>4.3. Idea with the greatest potential for success is presented to promote the design's acceptance using both 2-D and 3-D representations.</p> <p>4.4. Client feedback is sought, amendments are agreed to and recorded, and ideas are revised and refined</p> <p>4.5. A materials palette is selected to enhance spatial ideas</p> <p>4.6. Design is modified in response to critical feedback without losing integrity of the design intention</p>
5. Revise and refine solution	<p>5.1. Ergonomic and anthropometric principles are assessed in respect to the space and the intended products</p> <p>5.2. Spatial planning is further revised and resolved in response to client feedback</p> <p>5.3. <i>Materials, colours, finishes, fixtures and fittings</i> are selected appropriate to the concept and brief parameters</p> <p>5.4. Feedback is received through consultation with the client and incorporated into design solution</p>
6. Prepare a fully rendered client presentation	<p>6.1. Resource requirements are identified for presentation</p> <p>6.2. Final design solution is communicated effectively and creatively using a range of techniques and media</p> <p>6.3. Documentation <i>drawings</i> and material selections are prepared that are consistent with, and that best communicate, the design intent</p> <p>6.4. Work is completed to plan and within brief constraints</p> <p>6.5. Client feedback and response is analysed to determine success in achieving client satisfaction</p> <p>6.6. Own performance in the design process is examined to identify strengths and weaknesses</p> <p>6.7. Areas for improvement are identified</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- applying principles and elements of design
- communicating design concepts
- translating needs into design solutions
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- drawing using manual and computer based techniques
- sequencing operations
- meeting specifications
- clarifying and checking taskrelated information
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for designing for conservation and restoration
- organisational and site standards, requirements, policies and procedures for designing for conservation and restoration
- Australian Standards and the Building Code of Australia
- heritage and conservations regulations and conditions
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- conservation and restoration design themes and design development
- conservation and restoration of furnishings, soft furnishings and decorations
- sketching and drawing
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• problem identification and resolution |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively design for a conservation and restoration project to provide the client with creative solutions that satisfy the design brief • Effectively apply design elements and principles in designing for conservation and restoration • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for designing for conservation and restoration • Communicate effectively and work safely with others in the project
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to designing for conservation and restoration projects • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and

EVIDENCE GUIDE	
	<p>application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Conservation and heritage projects

- may include but not be limited to interior spaces of historic or cultural significance requiring development or restoration in keeping with strict conditions and guidelines for the building

RANGE STATEMENT	
Project brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Relevant research	<ul style="list-style-type: none"> may include but not be limited to similar products and typologies, materials, social and cultural influences, site analysis, site conditions, functional requirements, commercial application, heritage or conservation style, influences, conditions and heritage construction methods and materials
Information	<ul style="list-style-type: none"> may include but not be limited to usage requirements, building and service plans, ergonomics, anthropometrics, proxemics, costs, product performance and characteristics, existing conditions, new technologies and restoration techniques

RANGE STATEMENT	
Site analysis	<ul style="list-style-type: none"> may include but not be limited to a visit to the site to achieve a feel for the intention of the project brief and how services may be affected by it, identifying constraints of site and recording information, taking measurements and taking photos
Issues relating to the conservation and heritage environment	<ul style="list-style-type: none"> may include but not be limited to building standards, safety standards, guidelines relating to the specific commercial use, size, access, flexibility of structural changes, decision making processes, electricity supply, services available, building conditions, other occupancy, lease conditions, conservation orders and conditions, compatibility and matching of new and old materials and protection and conservation of features
Environmental aspects	<ul style="list-style-type: none"> may include but not be limited to how the use of raw materials effects the ecology and environment and how its continued use will effect the area it has been sourced from, energy consumption in achieving the material, greenhouse gases created, waste levels, resource utilisation and transport effects. Similarly what impact will be felt by reducing or stopping material from the source
Materials	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Colours	<ul style="list-style-type: none"> are to include but not be limited to colour principles, psychology, fundamentals, coordination, perception, contrast, harmony, effects on space, formulas and colour wheels
Finishes	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures
Fixtures and fittings	<ul style="list-style-type: none"> may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built in cabinetry or fittings, light fittings, lamps and picture framing may also include but not be limited to accessories such as trinkets, ceramics, trays,

RANGE STATEMENT	
	vases, carvings, baskets, pots, plants, candles, clocks, silverware, mirrors, frames, screens, floral displays, haberdashery, glassware, fireplace items, gifts, hand crafts, water features, photographs, pottery, personal items, statues, book ends, bowls and bottles
Drawings	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand, drafted technical drawings or drawings produced on computer using CAD software packages. These usually contain project specifications

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFID6007A Select and instruct consultants and contractors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to select and instruct consultants and contractors for all aspects of the project, in the solution of interior design projects and in accordance with project briefs.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in interior design operations of all sizes. Selecting and instructing consultants and contractors applies to a retail, consulting or design and decoration studio environment and involves application of skills and knowledge at a managerial level. These skills and knowledge are to be used within the scope of the person's job and authority.</p> <p>This unit applies employability skills in planning and organising and communication in order to organise work to be undertaken. Teamwork and problem solving skills are used to ensure all required skills are covered and supported to implement design solutions. Self management skills are applied to review and monitor selection of workers to ensure project timelines can be met.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse the project brief	<p>1.1. Applicable OHS, legislative and organisational requirements relevant to selecting and instructing consultants and contractors are verified and complied with</p> <p>1.2. Project brief is reviewed, confirmed and clarified with client</p> <p>1.3. Key requirements for the project are assessed and confirmed and parameters determined</p> <p>1.4. Resources are selected appropriate to work requirements and checked for operational effectiveness</p> <p>1.5. Communication with others in the design project is established and maintained</p> <p>1.6. Relevant research is conducted to gain all information which may be used to inform the selection process</p> <p>1.7. All required information is accessed and interpreted to inform the selection process</p>
2. Select consultants and contractors	<p>2.1. Consultants are selected to assist with project design information</p> <p>2.2. Contractors are selected to undertake decorating, building or services work</p> <p>2.3. Consultants and contractors are contracted to undertake the negotiated work</p> <p>2.4. Insurances necessary in the engaging of contractors and consultants are obtained</p>
3. Instruct consultants and contractors	<p>3.1. Consultants and contractors are communicated with to specify the requirements of the project brief, costings, quotes and the schedule</p> <p>3.2. Timelines and restrictions are agreed with consultants and contractors</p> <p>3.3. Budget constraints for consultants and contractors are set and adhered to in accordance with the project schedule</p> <p>3.4. Design specifications and constraints for consultants and contractors are set and adhered to in accordance with the project brief</p> <p>3.5. OHS policies and procedures are transmitted to consultants and contractors and adhered to</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicating design concepts and project requirements
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- sequencing operations
- meeting specifications
- computer aided design techniques
- clarifying and checking taskrelated information
- carrying out work according to OHS practices
- undertaking project management techniques

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for selecting and instructing consultants and contractors
- organisational and site standards, requirements, policies and procedures for selecting and instructing consultants and contractors
- Australian Standards and the Building Code of Australia
- contract management
- contractor and consultant types and management
- types of equipment and procedures for their safe use, operation and maintenance
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution techniques
- project management techniques

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively select and instruct consultants and contractors to complete a project in accordance with the project brief and schedule • Effectively apply quality and authorised procedures in selecting and instructing consultants and contractors • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for selecting and instructing consultants and contractors • Communicate effectively and work safely with others in the design team
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to selecting and instructing consultants and contractors • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning

EVIDENCE GUIDE	
	<p>knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Project brief

- may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target

RANGE STATEMENT	
	market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Relevant research	<ul style="list-style-type: none"> may include but not be limited to internet searches, phone/personal liaison, interviews and applications
Information	<ul style="list-style-type: none"> may include but not be limited to contractor and consultant reputations and outcomes, contractor and consultant prices, required insurances, work schedules, budget and payments, required skills and available skills
Consultants	<ul style="list-style-type: none"> may include but not be limited to builders, architects, engineers, decorators and designers
Contractors	<ul style="list-style-type: none"> may include but not be limited to builders, painters, tilers, carpet layers, sanders, cabinet makers, curtain makers, picture framers, electricians, plumbers and plasterers
Contracts	<ul style="list-style-type: none"> may include but not be limited to methods of securing agreement between parties
Insurances	<ul style="list-style-type: none"> may include but not be limited to professional indemnity, public liability, income protection,

RANGE STATEMENT	
	third party, comprehensive, building and contents insurance, workers compensation and any other legally prescribed insurance
Engaging	<ul style="list-style-type: none"> may include but not be limited to hire or appointment of the contractors by direct engagement or for engagement by the client
Schedules	<ul style="list-style-type: none"> may include but not be limited to detailed descriptions of which materials, products, finishes and accessories will be selected and how they will be applied
Timelines	<ul style="list-style-type: none"> may include but not be limited to the agreed project time span set and agreed for the project
Restrictions	<ul style="list-style-type: none"> may include but not be limited to laws, regulations or policies which may affect a project or those working on it, such as local government planning approval, work site entry legislation, licensing or heritage laws
Budget	<ul style="list-style-type: none"> may include but not be limited to the amount of funds the client has available to complete the project
Specifications	<ul style="list-style-type: none"> may include but not be limited to the measurements, procedures by which a product is constructed and materials to be utilised

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID6008A Evaluate design project outcomes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to evaluate design project outcomes, including all aspects of the project against the requirements of the project brief.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for examining design information and making comparative judgements against evaluation criteria.</p> <p>This unit covers employability skills in communication in order to evaluate information. Planning and organising and problem solving skills are required to apply design processes to outcomes. Self management and learning skills are applied to assess and reflect on own design skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify evaluation criteria	1.1. Project brief is analysed to determine key design requirements 1.2. Problems or underlying factors to be addressed by the project brief are verified 1.3. Communication requirements are identified for the project 1.4. Current industry design trends relating to project brief are researched and identified 1.5. Workplace and industry standards in relation to design presentation are researched and identified 1.6. Quality criteria that apply to design processes are researched and identified 1.7. Evaluation criteria are identified
2. Apply evaluation criteria	2.1. Drawings, mood boards and all associated documentation is examined to identify all features of the finished design 2.2. Finished design is evaluated against original design concept 2.3. The design and all specifications are evaluated against project brief to check consistency 2.4. The design is evaluated to identify how well elements and principles of design have been applied 2.5. The design is evaluated for consistency with current industry trends and influences 2.6. The design is evaluated to ensure client suitability including adherence to time and budget requirements 2.7. The design is evaluated for quality and innovative elements 2.8. Processes engaged to develop finished design are evaluated for effectiveness in achieving final outcomes
3. Suggest design improvements	3.1. Factors affecting the outcome of the project are examined and documented 3.2. Suggestions are made for adjustments to design to increase its ability to meet criteria 3.3. Technical design skills are used to reflect evaluation outcomes and communicate improvements 3.4. Potential design improvements are identified and tested for viability 3.5. Selection, adaptation and introduction of materials,

ELEMENT	PERFORMANCE CRITERIA
	<p>tools, technology and design processes are applied to design improvements</p> <p>3.6. Compliance with intellectual and copyright requirements is observed when incorporating ideas from others</p> <p>3.7. Evaluation report is compiled and produced</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- applying principles and elements of design
- communicating design concepts
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- sequencing operations
- meeting specifications
- clarifying and checking task-related information
- carrying out work according to OHS practices
- analysing and comparing information
- making judgements about design qualities

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for evaluating design project outcomes
- organisational and site standards, requirements, policies and procedures for evaluating design project outcomes
- Australian Standards and the Building Code of Australia applying to interior design
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- characteristics of materials, products and defects
- design themes and design development
- colours, furnishings and decorations
- product, material and finish types and descriptions
- evaluation and reflective practice techniques
- sketching and drawing
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively evaluate three design project outcomes including one residential and one commercial design, against project brief and additional evaluation criteria listed in the range statement • Effectively apply design elements and principles in evaluating design project outcomes • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for evaluating design project outcomes • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to evaluating design project outcomes • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and

EVIDENCE GUIDE	
	<p>application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Project brief	<ul style="list-style-type: none"> may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target market, budget, timeline, consultation requirements and colour requirements
Evaluation criteria	<ul style="list-style-type: none"> may include but not be limited to how the design: <ul style="list-style-type: none"> achieves project brief meets budget meets timeline meets client needs meets workplace and industry standards is suitable for end use and target market is suitable for current interior design trends and expectations complies with building standards applies environmental standards includes suitable access for people with disabilities and the elderly
Finished design	<ul style="list-style-type: none"> may include but not be limited to themes and concepts, fixtures, fittings and interior design products, furniture, soft furnishings and accessories, colour and finishes, specifications, quantities and qualities
Elements and principles of design	<ul style="list-style-type: none"> may include but not be limited to balance, similarity, texture, contrast, size, ground, volume, composition, orientation, form, structure, 2-D space, position, proportion, 3-D space, repetition, scale, line, rhythm, pattern, point, symmetry, tone and plane
Technical design skills	<ul style="list-style-type: none"> may include but not be limited to sketching, drawing, computer aided drafting (CAD)

RANGE STATEMENT	
	representations, visual documentation and specification

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFID6009A Produce digital presentations for commercial projects

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required to prepare, produce and present commercial project digital presentations for the promotion and marketing of design services, for the solution of interior decoration and design projects and in accordance with project briefs.
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in interior decoration and design operations of all sizes. Production of digital presentations for commercial projects applies to a retail, consulting or design and decoration studio environment and involves application of skills and knowledge at a managerial level. These skills and knowledge are to be used within the scope of the person's job and authority.</p> <p>This unit covers employability skills in communication, planning and organising and problem solving in order to determine presentation techniques and develop resources to promote design ideas. Technology is used to support presentation development. Self management and learning skills are applied to assess and reflect on own presentation skills and identify areas for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		
	<i>LMFID5014A</i>	<i>Use CAD applications to complete models and documentation for interior design projects</i>

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess project presentation requirements	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational requirements</i> relevant to producing digital presentations for commercial projects are verified and complied with</p> <p>1.2. <i>Project brief</i> is reviewed and clarified with <i>client</i> to determine presentation requirements</p> <p>1.3. <i>Parameters</i> for the project are assessed and confirmed</p> <p>1.4. <i>Resources</i> are selected appropriate to work requirements and checked for operational effectiveness</p> <p>1.5. <i>Communication</i> with others is established and maintained</p>
2. Prepare for digital presentation	<p>2.1. <i>Space</i> is measured to obtain all dimensions and <i>specifications</i></p> <p>2.2. Placement of <i>products</i> and <i>accessories</i> are examined and planned together with application of <i>finishes</i></p> <p>2.3. <i>Spatial organisation</i> of the area is assessed and planned in accordance with intended use</p> <p>2.4. Options for <i>digital presentation</i> solutions are explored</p> <p>2.5. Concept presentation is prepared and discussion of ideas and <i>themes</i> negotiated with client and other stakeholders</p>
3. Produce digital presentation	<p>3.1. Digital presentation options are assessed and compared</p> <p>3.2. <i>Project specific digital methodologies</i> are developed</p> <p>3.3. <i>Personal or business promotional strategies</i> are developed</p> <p>3.4. <i>Electronic business files and financial tools</i> are managed and used to assist in the development of the presentation</p> <p>3.5. Final digital presentation is produced and finalised in readiness for the client demonstration</p>
4. Present digital demonstration	<p>4.1. <i>Presentation methodology</i> is developed and prepared</p> <p>4.2. Digital strategies are presented to the client, selling the attributes of the design solution</p> <p>4.3. <i>Sketches, perspective drawings, axonometrics</i> and schedules are electronically presented to support the</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>presentation</p> <p>4.4. <i>Materials</i> and product <i>schedules</i> are produced and included in the developed <i>design statement</i> and digital presentation</p> <p>4.5. <i>Floor plan</i> and <i>elevations</i> are produced to portray placement of products and specify finishes using <i>rendering</i> techniques and portrayed digitally</p> <p>4.6. Presentation of digital information is supported using <i>colour boards</i> and <i>working drawings</i></p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- applying principles and elements of design
- communicating design concepts
- documenting and transferring information
- reading, interpreting and following information on work specifications, standard operating procedures and work instructions, and other reference material
- maintaining accurate records
- communicating within the workplace
- drawing and developing presentation material using manual and computer based techniques
- sequencing operations
- meeting specifications
- clarifying and checking task related information
- carrying out work according to OHS practices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for producing digital presentations for commercial projects
- organisational and site standards, requirements, policies and procedures for producing digital presentations for commercial projects
- elements and principles of design
- creativity and artistic relevance
- ergonomics, anthropometrics, proxemics and aesthetic values
- types of equipment and procedures for their safe use, operation and maintenance
- characteristics of materials, products and defects
- computer programs
- design themes and design development
- colours, furnishings and decorations
- digital presentation development and use
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- environmental protection requirements
- established communication channels and protocols
- problem identification and resolution

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Effectively produce a digital presentation for a commercial property, planning at least two spaces, to digitally provide the client with cost effective options which inform the project brief development • Effectively apply design elements and principles in producing digital presentations for commercial projects • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for producing digital presentations for commercial projects • Communicate effectively and work safely with others in the work area
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to producing digital presentations for commercial projects • specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of

EVIDENCE GUIDE	
	<p>tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <ul style="list-style-type: none"> • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances • Assessment may be in conjunction with assessment of other units of competency
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Project brief

- may include but not be limited to client needs and objectives, client aims and objectives and criteria for evaluation, milestones, organisational or personal profiles and aims, image requirements and function, target

RANGE STATEMENT	
	market, budget, timeline, consultation requirements and colour requirements
Client	<ul style="list-style-type: none"> may include but not be limited to suppliers, manufacturers, private clients, colleagues, retailers or the public
Parameters	<ul style="list-style-type: none"> may include but not be limited to scope of brief, approval to make changes (legislative and planning), effect or feel trying to be achieved, functionality (short and long term), budget restrictions and established timelines
Resources	<ul style="list-style-type: none"> may include but not be limited to computers, computer software, design software, computer aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Communication	<ul style="list-style-type: none"> may include but not be limited to verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and cooperative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language
Space	<ul style="list-style-type: none"> may include but not be limited to commercial spaces, rooms such as meeting rooms, offices, work areas, media rooms, entertainment areas, halls, foyers, lunch or break areas, workstations and ancillary areas
Specifications	<ul style="list-style-type: none"> may include but not be limited to the measurements, procedures by which a product is constructed and materials to be utilised
Products	<ul style="list-style-type: none"> may include but not be limited to furniture, soft furnishings, floor treatments, curtain treatments, built in cabinetry or fittings, light fittings, lamps, picture framing, tapware, kitchen fittings such as stoves, sinks, hotplates, extractors, scales, fridges, dishwashers, coffee machines, hand basins, shower parts, toilets, bidets, toilet fittings, bathroom fittings, connection points, switches, circuits, hot water systems, residual current detectors (safety switches), lights, fans, down

RANGE STATEMENT	
	lights, halogen lights, power outlets, powerboards, television points, phone points, internet connections, automated systems, standard wiring systems and personal computer integrated bases (data and power)
Accessories	<ul style="list-style-type: none"> may include but not be limited to trinkets, ceramics, trays, vases, carvings, baskets, pots, plants, candles, clocks, silverware, mirrors, frames, screens, floral displays, haberdashery, glassware, fireplace items, gifts, hand crafts, water features, photographs, pottery, office items, statues, book ends, bowls and bottles
Finishes	<ul style="list-style-type: none"> may include but not be limited to paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures
Spatial organisation	<ul style="list-style-type: none"> may include but not be limited to studying the positioning of elements, traffic flow and suitability of layout for the intended use of the area
Digital presentations	<ul style="list-style-type: none"> may include but not be limited to presentation boards, portfolios, photography, overhead projectors, data projectors, video and other forms of multimedia, it may also include PowerPoint presentations, CAD demonstrations, written presentations and other scenarios utilising different software applications
Themes	<ul style="list-style-type: none"> may include but not be limited to variations of colour ways (based on directions media), furnishing trends and decoration trends
Project specific digital methodologies	<ul style="list-style-type: none"> may include but not be limited to electronic walk throughs, product or technique slide shows, virtual galleries for the presentation of ideas and concepts and project specific details and specifications presented digitally
Personal or business promotional strategies	<ul style="list-style-type: none"> may include but not be limited to websites, blogs, virtual galleries, e-portfolios and other profile raising techniques
Electronic business files and financial tools	<ul style="list-style-type: none"> may include but not be limited to conventional computer based software (word processing, databases and spreadsheets), desktop publishing applications and electronic pricing

RANGE STATEMENT	
	and quoting systems
Presentation methodology	<ul style="list-style-type: none"> may include but not be limited to a strategic business case for selecting the digital strategy presented, a visual presentation and prepared script to accompany the presentation
Sketches	<ul style="list-style-type: none"> may include but not be limited to hand drawn images or ideation drawings completed freehand
Perspective	<ul style="list-style-type: none"> may include perspective drawing techniques including one, two and three point perspective to demonstrate eye lines and balance
Axonometrics	<ul style="list-style-type: none"> may include a method of drawing in which vertical lines are drawn to scale from an accurate plan which has usually been turned through 45°. Very useful for revealing the construction and the interiors of buildings. Axonometrics can appear somewhat distorted but measurements can be taken from them
Materials	<ul style="list-style-type: none"> may include but not be limited to solid timber (native and imported), manufactured timber products, plastic, metal, alloys, stones, glass, textiles, fibreglass, foam, cardboard, paper products or any other manipulable substance
Schedules	<ul style="list-style-type: none"> may include but not be limited to detailed descriptions of which materials, products, finishes and accessories will be selected and how they will be applied
Design statement	<ul style="list-style-type: none"> may include but not be limited to a statement which should demonstrate how good design has been taken into account in drawing up the development proposals. Its purpose is to improve the design of all new development. It should include a site analysis, set out the design principles and produce design solutions
Floor plan	<ul style="list-style-type: none"> may include but not be limited to a graphical representation in drawing form of the plans that represent how rooms or spaces are linked together in building plans
Elevations	<ul style="list-style-type: none"> may include but not be limited to the various views of a design including front view, rear view, side views, plan view and cut through views

RANGE STATEMENT	
Rendering	<ul style="list-style-type: none"> may include but not be limited to the pictorial representation of plans and elevations using colours, highlighting and shading to provide depth and photo-like drawings
Colour boards	<ul style="list-style-type: none"> may include but not be limited to a presentation on board displaying the colour usage and coordination with surface finishes, materials and textiles used throughout the project
Working drawings	<ul style="list-style-type: none"> may include but not be limited to drafted technical drawings or drawings produced on computer using CAD software packages. These usually contain project specifications

Unit Sector(s)

Unit sector	Interior decoration and design.
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFKB2001A Prepare for cabinet installation

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to prepare a site and confirm completeness of cabinets and components required for installation. It requires checking of job information and identifying quality issues.
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Application of the Unit

Application of the unit	This unit applies to the work conducted to assist in the installation of cabinets in new or renovated kitchens and bathrooms. Cabinets can include flat pack pre-cut cabinets, made to measure manufactured board, or solid timber cabinets within a kitchen, bathroom or other domestic environment.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Follow occupational health and safety (OHS) procedures for on-site work	1.1.OHS responsibilities for on-site work are identified 1.2.All legislative requirements are adhered to in work activity 1.3.Personal protective equipment (PPE) is used according to workplace practices
2. Prepare workplace	2.1. <i>Installation plan</i> is checked to identify requirements relevant to own work 2.2. <i>Tools and equipment</i> required for installation are located and checked for operational readiness 2.3.Area is cleared and prepared for operations 2.4.Power source is identified and accessed for power tools
3. Confirm cabinet readiness for assembly and installation	3.1. <i>Cabinet components</i> are identified and checked against delivery documentation and installation plan to confirm completeness 3.2.Cabinet components are transported from delivery vehicle to site in a manner that prevents injury to self and others or damage to cabinets 3.3.Cabinets and components are <i>assessed for quality</i>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Reading and applying work procedures and documents
- Housekeeping
- Using and applying workplace terminology
- Following safe work practices
- Using basic measurement equipment including rules, tape measures and levels
- Assembly skills
- Applying quality checks
- Recognising and responding to circumstances outside instructions or personal competence
- Using pre-checking and inspection techniques to ensure the tools and equipment are serviceable and ready to use

Required knowledge

- Safe work practices
- Documentation procedures
- Quality checking procedures
- Symbols and terminology on plans and drawings
- Features of cabinets and components

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<ul style="list-style-type: none"> • Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Effectively and safely prepare on-site area for work operations • Efficiently and safely check and prepare required tools and equipment • Conduct quality checks on components • Complete workplace documentation
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to cabinet installation • specifications and work instructions
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application • Assessment may be applied under project related

EVIDENCE GUIDE

	<p>conditions (real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
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Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Installation plan	<p>Installation plan may include:</p> <ul style="list-style-type: none"> • drawings and specifications • component lists • cabinet layout and design information • installation instructions
Tools and equipment	<p>Tools and equipment may include:</p> <ul style="list-style-type: none"> • screws, nails, bolts and wall plugs • cabinets • components • glues and finishes • hand and power tools • measuring devices
Cabinet components	<p>Cabinet components may include:</p> <ul style="list-style-type: none"> • hinges, runners and latches • locks • handles • drawer runners and slides • legs, plinths and kickboards • door and drawer systems • cabinet sections
Quality assessment of components	<p>Quality assessment of components may include:</p> <ul style="list-style-type: none"> • checks for completeness, scratches, chips and markings, colour and texture variations

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB2002A Provide assistance in cabinet installation

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to assist in the on-site installation of cabinets for kitchens or bathrooms. Skills required include assembling cabinets, fitting components and fixing cabinets to wall and floor surfaces, and making a limited range of adjustments.
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Application of the Unit

Application of the unit	<p>This unit applies to a trade's assistant assisting in the installation of new or renovated kitchens and bathrooms.</p> <p>Cabinets can include flat pack, pre-cut, made to measure manufactured board or solid timber cabinets within a kitchen, bathroom or other domestic environment.</p> <p>All on-site installation work covered by this unit is undertaken under direction of a qualified tradesperson or supervisor.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Lay out components and materials according to installation plan	1.1. Floor layout and individual cabinet construction requirements are determined from the installation plan or through checking with supervisor or tradesperson 1.2. Components are laid out to match sequence of assembly 1.3. Product codes and labels are checked for any special installation requirements
2. Assemble carcass	2.1. Joining methods are applied according to the installation plan or instructions from supervisor or tradesperson 2.2. Facings are completed 2.3. Carcass levels are checked 2.4. Components are attached 2.5. Minor adjustments are made according to instruction from supervisor or tradesperson 2.6. Carcasses are completed and checked for quality against instructions 2.7. Hand and power tools are used safely and according to operating instructions
3. Fix cabinets as specified by site supervisor or tradesperson	3.1. Cabinet fixing techniques are confirmed with supervisor or tradesperson according to site requirements 3.2. Cabinets are fixed to walls and floors according to the installation plan and instruction of supervisor or tradesperson 3.3. Components are fixed according to installation instructions
4. Finish work	4.1. Cabinets are cleaned and checked for quality 4.2. Site is cleaned and all tools put away 4.3. Project documentation is completed 4.4. Waste is disposed of according to environmental standards 4.5. Property is secured

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Safe use of hand and power tools listed in the range statement
- Reading and applying work procedures and documents
- Levelling and measurement
- Performing simple calculations
- Estimating approximate quantities
- Housekeeping
- Using and applying workplace terminology
- Following safe work practices
- Applying quality checks
- Sequencing operations
- Recognising and responding to circumstances outside instructions or personal competence
- Using pre-checking and inspection techniques to ensure the tools and equipment are serviceable and ready to use

Required knowledge

- Assembly processes for cabinets
- Safe work practices
- Documentation procedures
- Quality checking procedures
- Symbols and terminology on plans and drawings
- Features of cabinet components

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<ul style="list-style-type: none"> Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> Effectively and safely implement work instructions to assemble and install cabinets Efficiently and safely use required hand and power tools Effectively and safely apply cabinet components Follow instruction of supervisor
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> The application of competency is to be assessed in the workplace or realistically simulated workplace Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context Assessment is to comply with relevant regulatory or Australian Standards requirements The following resources should be made available: <ul style="list-style-type: none"> workplace location or simulated workplace materials and equipment relevant to cabinet installation specifications and work instructions
<p>Method of assessment</p>	<ul style="list-style-type: none"> Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application Assessment may be applied under project related

EVIDENCE GUIDE

	<p>conditions (real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Components	<p>Components may include:</p> <ul style="list-style-type: none"> • hinges, runners and latches • locks • handles • drawer runners and slides • legs, plinths and kickboards • door and drawer systems • cabinet sections
Joining methods	<p>Joining methods may include:</p> <ul style="list-style-type: none"> • screws and hinges • adhesives • patented devices • connectors
Hand and power tools	<p>Hand and power tools may include:</p> <ul style="list-style-type: none"> • drills, jigs, hammers and screwdrivers • power saws and drop saws
Cabinet fixing techniques	<p>Cabinet fixing techniques may include:</p> <ul style="list-style-type: none"> • glue • staples • bolts • screws • wall plugs
Secured	<p>Secured may include:</p> <ul style="list-style-type: none"> • locked • services turned off • work area sealed off

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB3001A Identify processes in kitchen and bathroom projects

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to identify the processes used in new and renovated kitchen and bathroom projects. This includes key stages, service providers and quality elements that typically characterise a project concerned with the development of kitchens and bathrooms.
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Application of the Unit

Application of the unit	This unit applies to situations where a person must have the skill and knowledge to properly identify the stages and processes used in installing or renovating kitchen and bathrooms. Examples would be tradespeople engaged in kitchen and bathroom work, sales advisers and designers who advise clients in kitchen and bathroom projects.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify key stages of a kitchen and bathroom renovation project	1.1. Identify <i>processes engaged in a site assessment</i> for kitchen and bathroom renovation projects and determine relevance for work 1.2. Identify elements of a <i>project design brief for renovation work</i> 1.3. Identify <i>project plan requirements</i> 1.4. Identify contracting and legislative requirements for renovation work 1.5. Identify sequence of work for renovations
2. Identify key stages of a new kitchen and bathroom project	2.1. Identify the processes engaged in a site assessment for new kitchen and bathroom projects and determine relevance for work 2.2. Identify elements of a <i>project design brief for new work</i> 2.3. Identify project plan requirements 2.4. Identify contracting and legislative requirements for new work 2.5. Examine sequence for new work
3. Identify the services to be provided by other personnel and companies for kitchen and bathroom projects	3.1. Identify services to be provided by <i>tradespeople in kitchen projects</i> 3.2. Identify services to be provided by <i>tradespeople in bathroom projects</i> 3.3. Identify <i>other services</i> involved in kitchen and bathroom projects
4. Examine quality elements for kitchen and bathroom projects	4.1. Identify <i>key information resources</i> for kitchen and bathroom projects 4.2. Identify <i>manufacturing processes</i> used for cabinet construction and explain features and benefits of techniques 4.3. Identify sources for supply of materials, fixtures and fittings 4.4. Identify market standards for <i>finish quality</i> and relate to own work environment and requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Language literacy and numeracy to the level of interpreting workplace documents and technical information
- Using and applying workplace terminology
- Sequencing information
- Assessing quality standards

Required knowledge

- Roles of trades in the kitchen and bathroom industry
- Roles of other service providers to the kitchen and bathroom industries
- Planning processes relevant to the kitchen and bathroom industries
- Processes used for the construction of cabinets
- Features of cabinets and components used in kitchen and bathroom projects
- Supply chains for kitchen and bathroom components and materials
- Market and industry standards
- Qualities of renovation and new work projects

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<ul style="list-style-type: none"> Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> Identify the key trades in the kitchen and bathroom industries and the services available Identify the sequence of operations and key considerations in new and renovation kitchen and bathroom project work Identify processes involved in kitchen and bathroom projects Determine market perceptions of quality in project outcomes
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> The application of competency is to be assessed in the workplace or realistically simulated workplace Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context Assessment is to comply with relevant regulatory or Australian Standards requirements The following resources should be made available: <ul style="list-style-type: none"> workplace location or simulated workplace information resources on kitchen and bathroom projects
<p>Method of assessment</p>	<ul style="list-style-type: none"> Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Processes engaged in a site assessment

Processes engaged in a site assessment may include:

- assessing structural aspects including flooring, walls, ceiling, roof construction, other structural features, windows, doors, and so on which may impact on design or installation work
- identifying architectural styles or features
- determining material use including use of asbestos
- gaining access
- services such as ventilation, plumbing, drainage, power and lighting
- waterproofing
- demolition requirements
- assessing building information, plans, drawings and materials data
- assessing levels and squareness of walls and floors
- conducting measurements

Project design brief for renovation work

Project design brief for renovation work may include:

- client needs and objectives
- client aims and objectives and criteria for evaluation
- milestones
- functional requirements
- budget, timeline, consultation requirements
- colour requirements

Project plan requirements

Project plan requirements may include:

- sequence of operations
- budget

RANGE STATEMENT	
	<ul style="list-style-type: none"> • timelines • allocation and delivery of resources • contingencies
Project design brief for new work	<p>Project design brief for new work may include:</p> <ul style="list-style-type: none"> • client or developer needs and objectives • criteria for evaluation • milestones • functional requirements • target market • budget, timeline, consultation requirements
Tradespeople in kitchen projects	<p>Tradespeople in kitchen projects may include:</p> <ul style="list-style-type: none"> • plumbers • tilers • cabinet makers • flooring specialists • builders • electricians
Tradespeople in bathroom projects	<p>Tradespeople in bathroom projects may include:</p> <ul style="list-style-type: none"> • builders • plumbers • tilers • waterproofing specialists • glaziers • electricians
Other services	<p>Other services may include:</p> <ul style="list-style-type: none"> • designers • architects • material and component suppliers • contractors • colour consultants • stone workers
Key information resources	<p>Key information resources may include:</p> <ul style="list-style-type: none"> • trade magazines • brochures • building organisations • design organisations • internet

RANGE STATEMENT	
Manufacturing processes	<p>Manufacturing processes may include:</p> <ul style="list-style-type: none"> • hand manufacture • computer numerical control (CNC) machining • mass production • solid wood production • flat panel construction • custom design • importation
Finish quality	<p>Finish quality may include:</p> <ul style="list-style-type: none"> • materials • design • costs • new technologies • components

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB3002A Determine requirements for installation of cabinets

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to assess a site, including walls, floors, appliances, services and other structural components to determine implications and modifications required for location and installation of cabinets.
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Application of the Unit

Application of the unit	<p>This unit applies to work conducted by on-site cabinet installers to determine any modifications required to cabinets, design or positioning before installation is conducted.</p> <p>Cabinets may be custom made or mass manufactured and include complete components such as doors, shelves and drawers.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Access the site	1.1. Review project brief and plans to guide <i>site assessment</i> 1.2. Arrange site access with client 1.3. Determine required access for materials and equipment 1.4. Follow on site occupational health and safety (OHS) procedures 1.5. Evaluate other work procedures being undertaken at the site for impact on installation work
2. Identify construction features that impact on cabinet installation	2.1. Identify <i>wall construction</i> and features and determine implications for cabinet installation 2.2. Identify <i>flooring construction</i> and features and determine implications for cabinet installation 2.3. <i>Other structural features</i> are analysed to determine implications for cabinet installation
3. Examine location of services	3.1. Identify and assess plumbing, water and drainage features that may impact on installation 3.2. Determine impact of <i>features of electrical service</i> on installation 3.3. Assess <i>other services</i> to determine impact on installation 3.4. Assess development plans to identify required changes or additional implications for installation
4. Identify installation requirements of appliances	4.1. Examine appliances to confirm location and placement in cabinets 4.2. Identify installation requirements for appliances from manuals and determine implications for cabinet installation
5. Determine implications for layout or design	5.1. Assess services and appliances to identify any compliance issues for layout or design 5.2. Use development plan and site assessment to determine implications for design and cabinet construction 5.3. Determine sequence for cabinet installation according to site findings
6. Document installation requirements	6.1. Document findings from site assessment to inform adjustments that are required to the design layout and cabinet construction 6.2. Record <i>information</i> using industry standards

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Language and literacy to the level of interpreting workplace documents, user manuals and required technical information
- Numeracy skills to the level of conducting accurate measurements and estimating quantities
- Using and applying workplace terminology
- Sequencing information
- Assessing quality standards
- Levelling
- Observation
- Accessing and applying the Building Code of Australia
- Ability to resource information appropriate to cabinet construction
- Documentation skills
- Applying safety procedures

Required knowledge

- Roles of trades in the kitchen and bathroom industry
- Planning processes
- Processes used for the construction of cabinets
- Features of cabinets and components used in kitchen and bathroom projects
- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for assessing a site
- Organisational and site standards, requirements, policies and procedures for assessing a site
- The role of Australian Standards and the Building Code of Australia
- Characteristics of materials, products and defects
- Procedures for documenting workplace records and information
- Appropriate mathematical procedures for estimation and measurement
- Environmental protection requirements
- Established communication channels and protocols
- Problem identification and resolution techniques
- Basic building and architectural terminology
- Common structural and non-structural components of a residential building
- Materials and methods involved in interior refurbishment
- Local regulations/councils etc
- Construction techniques/ technologies
- Statutory planning regulations affecting kitchens and bathrooms

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<ul style="list-style-type: none"> Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed.
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> Conduct a site assessment and identify all issues that will impact on the installation of cabinets Identify limitations of cabinet construction and implications for design Identify compliance issues for work Complete detailed documentation to inform installation Take accurate measurements
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> The application of competency is to be assessed in the workplace or realistically simulated workplace Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context Assessment is to comply with relevant regulatory or Australian Standards requirements The following resources should be made available: <ul style="list-style-type: none"> workplace location or simulated workplace tools required for site assessment plans, drawings and manuals relating to project
<p>Method of assessment</p>	<ul style="list-style-type: none"> Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application

EVIDENCE GUIDE

- Assessment may be applied under project related conditions (real or simulated) and require evidence of process
- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Site assessment

Site assessment may include:

- assessing structural aspects including flooring, walls, ceiling, roof construction, other structural features, windows, doors etc which may impact on design or installation work
- determining material use including use of asbestos
- access
- services such as ventilation, plumbing, drainage, power and lighting
- waterproofing
- demolition requirements
- assessing building information, plans, drawings and materials data
- assessing levels and squareness of walls and floors
- conducting measurements

Wall construction

Wall construction may include:

- solid masonry
- stud frame
- load bearing members
- non-load bearing members
- bracing
- squareness
- level
- skirting boards

Flooring construction

Flooring construction may include:

- concrete slab
- timber
- steel
- under floor access
- squareness

RANGE STATEMENT	
	<ul style="list-style-type: none"> • levels • skirting boards
Other structural features	<p>Other structural features may include:</p> <ul style="list-style-type: none"> • beams • columns • structural damage • finish • ledges
Features of electrical service	<p>Features of electrical service may include:</p> <ul style="list-style-type: none"> • position and number of power outlets • adequacy of supply • data and communications cabling • location near other services
Other services	<p>Other services may include:</p> <ul style="list-style-type: none"> • gas, data, communications, plumbing, air extraction and conditioning and vents
Information	<p>Information may include:</p> <ul style="list-style-type: none"> • measurements • quotes • specifications • design adjustments

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB3003A Check and measure fit of cabinets

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to take measurements on-site and check cabinetry to ensure accurate fit. It requires assessment of levels and squareness of walls and floors and other structural components to determine adjustments required on cabinets to ensure exact fit.
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Application of the Unit

Application of the unit	This unit applies to work conducted by on-site installers of cabinets in kitchens, bathrooms and other ancillary areas in residential situations. Cabinets may be custom made or mass manufactured and include complete components such as doors, shelves and drawers.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Conduct site measurements	1.1. Obtain access to site according to project guidelines and occupational health and safety (OHS) procedures 1.2. Select <i>measuring devices</i> and prepare for use 1.3. Conduct site measurements and record according to industry standards 1.4. Determine levels and squareness of walls and floor 1.5. Measure and record <i>other structural aspects</i> of site that impact on installation
2. Assess measurements against cabinet dimensions	2.1. Determine cabinet dimensions from cabinet or construction plans 2.2. Check site measurements and identify discrepancies from cabinet installation requirements
3. Identify required adjustments	3.1. Calculate adjustments required to ensure proper installation 3.2. Mark up cabinets and walls or floor to inform required adjustments 3.3. Complete workplace documentation

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Language and literacy to the level of interpreting workplace documents and technical information
- Numeracy skills to the level of conducting accurate measurements, estimating quantities and interpreting drawings
- Assessing quality standards
- Using measurement tools
- Levelling
- Observation
- Documentation skills
- Applying safety procedures

Required knowledge

- Processes used for the construction of cabinets
- Features of cabinets and components used in kitchen and bathroom projects
- State or Territory OHS legislation, regulations, standards and codes of practice relevant to on-site work
- The role of Australian Standards and the Building Code of Australia
- Characteristics of materials, products and defects
- Procedures for documenting workplace records and information
- Appropriate mathematical procedures for estimation and measurement
- Problem identification and resolution techniques
- Basic building and architectural terminology
- Common structural and non-structural components of a residential building

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<ul style="list-style-type: none"> Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> Identify and measure structural aspects that impact on cabinet construction and installation Complete detailed documentation to inform installation Identify inconsistencies in measurements Take and record accurate measurements
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> The application of competency is to be assessed in the workplace or realistically simulated workplace Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context Assessment is to comply with relevant regulatory or Australian Standards requirements The following resources should be made available: <ul style="list-style-type: none"> workplace location or simulated workplace tools required for measurement plans, drawings and manuals relating to project
<p>Method of assessment</p>	<ul style="list-style-type: none"> Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application Assessment may be applied under project related conditions (real or simulated) and require evidence of

EVIDENCE GUIDE	
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| | <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency |
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Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Measuring devices	<p>Measuring devices may include but are not limited to:</p> <ul style="list-style-type: none"> • tape measures • laser beams • angle readers • rulers
Other structural aspects	<p>Other structural aspects may include but are not limited to:</p> <ul style="list-style-type: none"> • structural damage • finish • ledges • skirting boards • service outlets • vents • gas, data, communications, air extraction and conditioning and vents

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB3004A Conduct on-site adjustments to cabinets and components

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge to examine required cabinet adjustments, select appropriate techniques and make adjustments to pre-made cabinets in order to achieve accurate fit at site of installation. It includes conducting measurements to check accuracy of adjustments made.
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Application of the Unit

Application of the unit	This unit applies to work conducted by installers of cabinets in residential situations and is based on measurements taken at the site of installation. Cabinets may be custom made or mass manufactured and include complete components such as doors, shelves and drawers.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine required adjustment techniques	1.1. Obtain access to site according to project guidelines and occupational health and safety (OHS) procedures 1.2. Examine measurements and required adjustments 1.3. Apply <i>problem solving skills</i> to select techniques to conduct adjustments with minimal disruption to cabinet construction 1.4. Check cabinet design to ensure design and industry standards will be maintained with completion of cabinet adjustments
2. Make adjustments	2.1. Inspect and confirm cabinet markings to ensure accurate adjustments 2.2. Conduct <i>adjustments</i> using appropriate techniques and tools 2.3. Clean area and dispose of rubbish according to environmental standards
3. Confirm accurate fit	3.1. Conduct measurements to ensure cabinet readiness for installation 3.2. Measure edges and lines to ensure fit is straight and flush 3.3. Check doors, drawers, runners, handles and latches for correct alignment 3.4. Check tolerances to ensure standards are achieved 3.5. Complete <i>workplace documentation</i>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Language and literacy to the level of interpreting workplace documents and technical information
- Numeracy skills to the level of conducting accurate measurements and interpreting drawings
- Using measurement tools
- Using hand and power tools
- Levelling
- Observation
- Documentation skills
- Checking quality outcomes
- Applying safety procedures

Required knowledge

- Processes used for the construction and modification of cabinets
- Features of cabinets and components
- State or Territory OHS legislation, regulations, standards and codes of practice relevant to on-site work
- Characteristics of materials, products and defects
- Procedures for documenting workplace records and information
- Appropriate mathematical procedures for estimation and measurement
- Problem identification and resolution techniques

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<ul style="list-style-type: none"> Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> Take and record accurate measurements Apply problem solving techniques to determine adjustment techniques Complete range of operations to adjust cabinets Use hand and power tools safely and efficiently Conduct quality checks
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> The application of competency is to be assessed in the workplace or realistically simulated workplace Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context Assessment is to comply with relevant regulatory or Australian Standards requirements The following resources should be made available: <ul style="list-style-type: none"> workplace location or simulated workplace tools required for measurement and completing adjustments plans, drawings and manuals relating to project
<p>Method of assessment</p>	<ul style="list-style-type: none"> Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application Assessment may be applied under project related

EVIDENCE GUIDE

	<p>conditions (real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Problem solving skills

Problem solving skills may include but are not limited to:

- re-examining plans and drawings
- comparing measurements
- determining root cause
- applying product knowledge to situation
- discussing issue with colleagues
- comparing alternative techniques
- assessing pros and cons of options
- applying principles of construction to situation
- identifying associated hazards

Adjustments

Adjustments may include but are not limited to:

- planing
- sanding
- drilling
- screwing
- aligning
- gluing
- fixing

Workplace documentation

Workplace documentation may include but not limited to:

- design drawings and plans
- order forms
- quality documentation
- job forms
- specifications

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB3005A Fabricate cabinets for the built-in environment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to plan production processes and construct and assemble components to fabricate cabinets that meet predetermined specifications. It includes use of materials and processes typically applied within a cabinet manufacturing environment.
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Application of the Unit

Application of the unit	This unit applies to work conducted in a manufacturing workshop environment. Processes may include use of computer numerical control (CNC) and static machines. Where these processes are applied, relevant Furnishing Training Package units should be selected. Materials include particleboard, fibre board and solid timber.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan cabinet construction	1.1. Complete or interpret drawings, specifications and customer instructions including design, tolerances, process, materials, finish and quantity 1.2. Identify and select <i>construction techniques</i> to be used in cabinet manufacture 1.3. Identify industry standards for cabinet construction 1.4. Plan construction and assembly sequence 1.5. Develop a cutting list 1.6. Identify <i>tools, machines and equipment</i> suitable for construction and check for safe and effective operation 1.7. Determine procedures for checking quality at each stage of the process 1.8. Clear work area and prepare for production
2. Select and prepare materials for cabinet construction	2.1. Identify features, benefits and limitations of <i>materials</i> used for cabinet construction 2.2. Identify <i>surface treatments</i> used for cabinets in a <i>range of applications</i> 2.3. Identify industry standards for materials used in cabinets 2.4. Select materials to meet the customer requirements 2.5. Prepare materials for use
3. Select and prepare cabinet components	3.1. Identify features, benefits and limitations of <i>components</i> used for cabinets in a range of applications 3.2. Identify industry standards for components used for cabinets 3.3. Select components to meet the customer requirements 3.4. Prepare components for use
4. Construct cabinets	4.1. Observe workplace health and safety requirements, including personal protection needs, throughout the work 4.2. Use tools, machines and equipment in accordance with safety requirements and manufacturers' specifications 4.3. Cut and form materials in accordance with the plan 4.4. Manufacture cabinets and check against set-outs for tolerances, fit and accuracy

ELEMENT	PERFORMANCE CRITERIA
	4.5. Check product against plans at identified checkpoints
5. Assemble cabinets	5.1. Assemble cabinets using components identified in construction plan 5.2. Attach components and check against set-outs for accuracy, fit, twist and distortion 5.3. Assemble and fit doors, drawers and shelves 5.4. Prepare product for final finish, including the removal of bruises, scratches, dents and marks 5.5. Clean work area and dispose of rubbish according to environmental standards 5.6. Complete workplace documentation

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Language and literacy to the level of interpreting workplace documents and technical information
- Numeracy skills to the level of conducting accurate measurements and interpreting drawings
- Selecting and applying cabinet components
- Using measurement tools
- Using hand and power tools
- Applying construction and assembly techniques
- Preparing cutting list
- Checking quality outcomes
- Applying safety procedures

Required knowledge

- Processes used for the construction of cabinets
- Features of cabinets and components used in kitchen and bathroom and other residential projects
- State or Territory occupational health and safety (OHS) legislation, regulations, standards and codes of practice relevant to work
- Characteristics of materials, products and defects
- Procedures for documenting workplace records and information
- Appropriate mathematical procedures for measurement
- Problem identification and resolution techniques

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<ul style="list-style-type: none"> • Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Interpret and apply information from plans and drawings • Identify and apply materials and components used in cabinets for kitchens, bathrooms and other residential settings • Use construction techniques to fabricate cabinets • Assemble cabinet components • Assess quality outcomes • Use hand and power tools safely and efficiently
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • tools and equipment required for constructing and assembling cabinets • plans, drawings and manuals relating to work
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning

EVIDENCE GUIDE

	<p>knowledge to ensure correct interpretation and application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Construction techniques

Construction techniques may include:

- use of CNC or static machinery
- computer-aided manufacturing

Tools, machines and equipment

Tools, machines and equipment may include:

- CNC equipment
- static machines
- hand and power tools
- measuring devices

Materials

Materials may include:

- glass
- particleboard
- fibre board
- solid timber
- veneer
- vinyl
- laminates
- adhesives
- tops
- edges

Surface treatments

Surface treatments may include:

- lacquers, polishes and oils
- laminates
- paints

A range of applications

A range of applications must include:

- Kitchens or bathrooms
- Other domestic settings such as laundries

Components

Components may include:

- baskets
- rollers

RANGE STATEMENT

	<ul style="list-style-type: none"> • hinges • dowel • pins • cams • metal frames • connectors • patented devices • handles
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Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB3006A Install fitted cabinets and components

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to install cabinets according to specifications and design plans, including the application of selected components to achieve a quality finish. This unit requires an ability to access and apply information and instruction for the use of components and cabinet products.
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Application of the Unit

Application of the unit	This unit applies to work conducted in the on-site installation of cabinets within a kitchen, bathroom or ancillary residential environment. Application of components includes all fixtures and fittings required to complete the cabinet installation. Cabinets may be custom made or mass manufactured and include complete components such as doors, shelves and drawers.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine requirements for cabinet components	1.1. Identify and access <i>information resources</i> for <i>cabinet components</i> to inform installation 1.2. Identify <i>features of components</i> and verify suitability to application 1.3. Identify and prepare tools and equipment required for applying components 1.4. Check cabinets to ensure markings and holes required for components are correctly located
2. Install cabinets	2.1. Interpret designs or plans to determine cabinet installation requirements 2.2. Confirm cabinet markings to ensure accurate installation 2.3. Conduct measurements to confirm fit 2.4. Install cabinets according to plans and specifications 2.5. Accommodate <i>appliance</i> installation requirements and <i>service</i> features in installation 2.6. <i>Fix</i> components according to cabinet requirements 2.7. Use hand and power tools safely and efficiently 2.8. Clean work area and dispose of rubbish according to environmental standards
3. Check quality finish	3.1. Conduct measurements to ensure cabinet is square and level 3.2. Measure edges and lines to ensure fit is level, straight and flush 3.3. Check doors, drawers, runners, handles and latches for correct alignment 3.4. Check tolerances meet standard requirements 3.5. Complete workplace documentation

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Language and literacy to the level of interpreting workplace documents and technical information
- Numeracy skills to the level of conducting accurate measurements and interpreting drawings
- Using measurement tools
- Using hand and power tools
- Levelling
- Using installation processes
- Applying cabinet components
- Problem solving skills
- Documentation skills
- Checking quality outcomes
- Applying safety procedures

Required knowledge

- Processes used for the installation of cabinets
- Features of cabinets and components
- State or Territory occupational health and safety (OHS) legislation, regulations, standards and codes of practice relevant to on site work
- Characteristics of materials, products and defects
- Cabinet installation processes
- Procedures for documenting workplace records and information
- Appropriate mathematical procedures for estimation and measurement
- Problem identification and resolution techniques

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<ul style="list-style-type: none"> Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> Access and apply information on installation requirements of cabinet components Interpret installation requirements Apply problem solving techniques to determine and address installation techniques or issues Complete range of operations to install cabinets Use hand and power tools safely and efficiently Conduct quality checks
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> The application of competency is to be assessed in the workplace or realistically simulated workplace Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context Assessment is to comply with relevant regulatory or Australian Standards requirements The following resources should be made available: <ul style="list-style-type: none"> workplace location or simulated workplace tools required for measurement and completing installation plans, drawings and manuals relating to cabinet installation
<p>Method of assessment</p>	<ul style="list-style-type: none"> Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge Assessment methods must be by direct observation of tasks and include questioning on underpinning

EVIDENCE GUIDE

	<p>knowledge to ensure correct interpretation and application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Information resources	Information resources may include: <ul style="list-style-type: none"> • manufacturers specifications • installation instruction manuals • drawings and plans • brochures
Cabinet components	Cabinet components may include: <ul style="list-style-type: none"> • hinges, runners, latches • locks • handles • drawer runners, slides • legs • door and drawer systems
Features of components	Features of components may include: <ul style="list-style-type: none"> • size • quality • finish • purpose
Appliances	Appliances may include: <ul style="list-style-type: none"> • stoves, ovens, cook tops • exhaust fans, range hoods • lighting • water filters • dishwasher • refrigerator • washing machine • dryer
Services	Services may include: <ul style="list-style-type: none"> • plumbing • electrical systems

RANGE STATEMENT	
	<ul style="list-style-type: none"> • air conditioning • ventilation
Fix	Fixing may included: <ul style="list-style-type: none"> • screwing • aligning • gluing • fixing components

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB3007A Provide advice on cabinet design features

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to provide customers with information relating to the features and benefits of cabinet designs and components, and to advise on best fit to meet customer needs.
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Application of the Unit

Application of the unit	This unit applies to skills used in a kitchen or bathroom showroom or similar environment where a set range of cabinet designs and components are available. Basic technical and design information relevant to cabinets is required to achieve this unit.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Confirm customer requirements	1.1. Obtain and document <i>customer requirements</i> for cabinet design features 1.2. Identify <i>design requirements</i> for cabinet with the customer 1.3. Locate and obtain plans, drawings and any design details relevant to the customer enquiry 1.4. Confirm services available and appropriate to the customer's needs with the customer
2. Provide technical information on design options	2.1. Explain cabinet design options to the customer noting specific features and benefits of the layout and inclusions 2.2. Access and research <i>technical information</i> on all cabinet designs available to ensure advice to customers is informed 2.3. Provide design brochures, drawings and other advisory materials to the customer 2.4. Explain construction, installation and ordering details of the designs to the customer
3. Provide technical information on cabinet components	3.1. Access and research technical and product information on all cabinet fixtures, fittings and finishes to ensure advice to customers is informed 3.2. Locate and provide brochures, drawings and information on cabinet components and products to the customer as required 3.3. Communicate features, benefits and limitations of available components that are suitable to the <i>context</i> required by the customer 3.4. Discuss application methods, manufacturing processes and environmental impact of cabinet components with the customer as required
4. Suggest best design package to meet customer needs	4.1. Apply <i>elements and principles of design</i> to examine the appropriateness of cabinet products for customer requirements 4.2. Discuss options with the customer to ascertain responses and preferences 4.3. Provide advice on best option to meet customer requirements 4.4. Confirm preferences with the customer 4.5. Determine required quantities based on manufacturer specifications, plans and customer

ELEMENT	PERFORMANCE CRITERIA
	needs 4.6. Calculate costs according to work policy and procedures
5. Complete cabinet design documentation	5.1. Record customer details and check for accuracy 5.2. Document details of design, fixtures, fittings and finishes for customer according to workplace practice 5.3. Document any special requirements or conditions 5.4. Place formal order and provide documentation to the customer

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Language and literacy to the level of interpreting workplace documents and product information
- Numeracy skills to the level of estimating approximate quantities and calculating costs
- Using and applying workplace terminology
- Following safe work practices
- Applying quality practices
- Communication skills
- Sales skills
- Recognising and responding to circumstances outside instructions or personal competence
- Interpreting customer information
- Providing information and advice relevant to customer requirements
- Documentation
- Using computer operations for internet access and searches
- Analysing performance characteristics

Required knowledge

- Construction processes for cabinet designs
- Safe work practices
- Documentation procedures
- Quality checking procedures
- Symbols and terminology on plans and drawings
- Features of cabinet components
- Principles and elements of design
- Characteristics of materials, products and defects
- Effects of finishes and finishing techniques
- Appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	<ul style="list-style-type: none"> Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> Identify features, benefits and limitations of cabinet design features Engage customer to confirm cabinet requirements Provide solution to meet customer requirements Use and communicate technical information to inform design options
Context of and specific resources for assessment	<ul style="list-style-type: none"> The application of competency is to be assessed in the workplace or realistically simulated workplace Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context Assessment is to comply with relevant regulatory or Australian Standards requirements The following resources should be made available: <ul style="list-style-type: none"> workplace location or simulated workplace range of cabinet designs and products specifications and work instructions
Method of assessment	<ul style="list-style-type: none"> Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application Assessment may be applied under project related conditions (real or simulated) and require evidence of

EVIDENCE GUIDE	
	<p>process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Customer requirements

Customer requirements may include:

- client aims and objectives and criteria for evaluation
- function
- budget
- timelines
- consultation requirements
- brand preferences

Design requirements

Design requirements may include:

- storage
- appliances
- colour
- materials
- finish
- vanity, toilet, shower and bath requirements
- components such as hinges, runners, handles, latches, taps, splashbacks and bench tops
- components such as taps, spas, basins and bath
- doors, drawers and cabinet styles
- dimensions
- usage patterns
- quality

Technical information

Technical information may include:

- cabinet standards for application in kitchens, bathrooms and other domestic settings
- product codes
- dimensions
- characteristics and qualities
- environmental specifications
- installation requirements
- ergonomic specifications

RANGE STATEMENT	
	<ul style="list-style-type: none"> • quality • operation • warranties • available colour range • price • construction of products • care and maintenance requirements • stain and dirt resistance • product performance • colour fastness, colour fading properties • availability
Context	Context must include: <ul style="list-style-type: none"> • kitchen or bathroom and other domestic settings
Elements and principles of design	Elements and principles of design may include: <ul style="list-style-type: none"> • line, shape, form, texture and colour • balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, emphasis, proximity, alignment, space, ergonomics, arrangement, aesthetic relations, tension and development methods

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB3008A Identify cabinet construction and installation methods

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to identify production processes and construction features used in the manufacture of cabinets, installation methods used and the implications for designs.
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Application of the Unit

Application of the unit	This unit covers the interpretation of information on cabinet construction and installation methods by those working in design and technical advisory roles in the kitchen and bathroom industry. Information may be used to provide advice to customers, confirm orders or inform design or product selection. It does not include skills to perform installation tasks or to plan out a particular installation.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify common production processes for the manufacture of cabinets	1.1. Identify range of cabinets on the market and describe quality features 1.2. Identify industry standards for cabinets 1.3. Describe computer numerical control (CNC) processes 1.4. Describe computer aided manufacture (CAM) processes 1.5. Describe custom manufacture principles and processes 1.6. Identify common techniques used for joining, assembling and finishing cabinets
2. Identify features and limitations of construction methods	2.1. Identify features and limitations of mass manufactured cabinets 2.2. Identify features and limitations of custom made cabinets 2.3. Identify range of variations able to be achieved with cabinet construction methods
3. Identify installation methods used	3.1. Identify <i>methods used to install cabinets</i> 3.2. Explain importance of <i>site analysis</i> and identify common impacts on designs 3.3. Identify <i>expertise and skills engaged in installation</i> 3.4. Identify <i>other considerations in cabinet installation</i>
4. Determine implications for kitchen and bathroom design	4.1. Identify <i>implications of appliances</i> on cabinet construction and installation 4.2. Identify <i>implications of services</i> on cabinet construction and installation 4.3. Identify implications of cabinet construction methods and installation requirements for designs
5. Identify sourcing requirements for cabinets	5.1. Access and apply information sources on suppliers for cabinets and components 5.2. Determine <i>requirements for ordering cabinets</i> and components 5.3. Determine supplier timelines and delivery requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Language and numeracy skills to the level of interpreting workplace documents and information
- Applying safety procedures
- Research skills
- Comparing findings
- Assessing implications

Required knowledge

- Processes used for the construction and installation of cabinets
- Features of cabinets and components used in kitchen and bathroom projects
- State or Territory occupational health and safety (OHS) legislation, regulations, standards and codes of practice relevant to kitchen and bathroom cabinets and components
- Characteristics of materials, products and defects
- Information resources

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<ul style="list-style-type: none"> Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> Access and interpret product information Determine limitations and benefits of different methods used in the construction and installation of cabinets Identify implications for design Identify requirements for sourcing and ordering cabinets and components
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> The application of competency is to be assessed in the workplace or realistically simulated workplace Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context Assessment is to comply with relevant regulatory or Australian Standards requirements The following resources should be made available: <ul style="list-style-type: none"> workplace location or simulated workplace work related information resources
<p>Method of assessment</p>	<ul style="list-style-type: none"> Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application Assessment may be applied under project related conditions (real or simulated) and require evidence of

EVIDENCE GUIDE

	<p>process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
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Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Methods used to install cabinets	<p>Methods used to install cabinets may include:</p> <ul style="list-style-type: none"> • use of screws, fixtures and patented devices • use of adhesives, clips and fasteners • use of sealants • use of installation sequences
Site analysis	<p>Site analysis may relate to:</p> <ul style="list-style-type: none"> • location of services • measurements and dimensions • flooring and wall construction • materials and finishes impacting on installation • structural features that impact on installation • data cabling
Expertise and skills engaged in installation	<p>Expertise and skills engaged in installation may include:</p> <ul style="list-style-type: none"> • measurement • quality checking • assembly • use of hand and power tools • modifying and adjusting cabinets • working with other tradespeople
Other considerations in cabinet installation	<p>Other considerations in cabinet installation may include:</p> <ul style="list-style-type: none"> • installation requirements of appliances • waterproofing considerations • sequence of installation • design modifications • translation of design details into technical specifications
Implications of appliances	<p>Implications of appliances may include:</p>

RANGE STATEMENT	
	<ul style="list-style-type: none"> • requirements for changes to cabinet or design due to sizing or placement requirements • compliance issues • location and access
Implications of services	Implications of services may include: <ul style="list-style-type: none"> • requirements for changes to cabinet or design due to placement • compliance issues • location and access
Requirements for ordering cabinets	Requirements for ordering cabinets may include: <ul style="list-style-type: none"> • measurements and dimensions • colour • product codes and specifications • timelines • delivery details • drawings • special conditions • customer authorisation

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB4001A Determine spatial planning considerations for kitchen design

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to examine space requirements and usage patterns for kitchens and determine planning considerations for designs.
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Application of the Unit

Application of the unit	This unit of competency applies to work conducted by kitchen designers in the analysis of design requirements. It includes analysis of appliances, services, regulatory requirements, storage requirements and applications to determine implications for kitchen design.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine kitchen work and traffic flow patterns	1.1. Key work zones for kitchens are identified and prime activities and associated appliances determined 1.2. Traffic flow patterns and considerations for kitchen space are identified 1.3. Work triangle concepts are identified and applied to modern kitchen design
2. Examine layout options	2.1. Location of services is identified and implications for relocation determined 2.2. Range of layout options and work and traffic flow implications are examined 2.3. Suitability of layout options for kitchen space are analysed and limitations and benefits determined
3. Determine storage options	3.1. Storage requirements of kitchen work zones are identified 3.2. Storage options are examined for suitability to kitchen spaces and implications for design determined 3.3. Dimensions and space requirements of standard storage options are identified for design
4. Assess kitchen ergonomic considerations	4.1. Basic principles of ergonomics are used to determine space planning implications 4.2. Requirements for working height are identified 4.3. Manual handling considerations for kitchen design are identified 4.4. Storage principles are considered to determine implications for design 4.5. Special considerations for children, older people and/or disabled people are taken into account where applicable
5. Examine requirements for kitchen appliances	5.1. Key appliances used in kitchens are identified and standard dimensions, clearances and required services determined 5.2. Manufacturer guidelines and statutory regulations regarding the placement and installation of appliances are identified and implications for design examined 5.3. Work space implications for appliances are analysed and implications for design determined

ELEMENT	PERFORMANCE CRITERIA
6. Determine planning considerations for services	<p>6.1. Regulations regarding the location of power outlets and lighting, and electrical work undertaken are identified</p> <p>6.2. Regulations regarding the location of plumbing outlets and plumbing work undertaken are identified</p> <p>6.3. Regulations regarding the location of gas outlets and gas plumbing work undertaken are identified</p> <p>6.4. Implications of service requirements on kitchen design are determined</p> <p>6.5. <i>Lighting sources</i> are examined and requirements for kitchen design determined</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Accessing and interpreting workplace information
- Applying safety procedures
- Research skills
- Assessing implications
- Translating information to space planning

Required knowledge

- Features of kitchen components
- State or territory occupational health and safety (OHS) legislation, regulations, standards and codes of practice relevant to kitchen designs
- Characteristics of storage, appliance, lighting and service options
- Information resources

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Access and interpret kitchen design information • Determine limitations and benefits of different spatial planning options used in kitchen design • Identify ergonomic considerations for kitchen designs • Identify regulatory considerations for kitchen designs • Determine the implications of appliances, storage options and work patterns on kitchen designs
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • work related information resources
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application • Assessment may be applied under project related

EVIDENCE GUIDE

	<p>conditions (real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Key work zones for kitchens

Key work zones for kitchens may include:

- food storage zone
- food preparation zone
- clean up zone
- bench top clearances
- landing space

Considerations

Considerations may include:

- floor clearances
- traffic clearances
- space requirements for reaching, bending and crouching
- eating space requirements
- additional space requirements for areas such as computers, entertaining and laundry
- number and types of users of kitchen

Range of layout options

Range of options may include:

- single wall set out
- galley
- L-shape
- U-shape
- island

Storage requirements

Storage requirements may include:

- food storage - perishable and non-perishable
- food preparation - utensils, appliances, cookware, condiments, ovenware and cookbooks
- clean up - garbage bin, storage containers, cleaning items and products
- additional storage - crockery, glassware, serving platters and small appliances

RANGE STATEMENT	
Storage options	<p>Storage options may include:</p> <ul style="list-style-type: none"> • cupboards and drawers • wire shelving • baskets • mobile storage unit • railing • shelves • pantry • swing out cupboards • extension worktops • base cupboards • overhead cupboards
Basic principles of ergonomics	<p>Basic principles of ergonomics may include:</p> <ul style="list-style-type: none"> • clearance - minimum spatial tolerances for access • reach - maximum spatial tolerances and workspace envelope
Storage principles	<p>Storage principles may include:</p> <ul style="list-style-type: none"> • importance of items • frequency of use • function • sequence of use
Key appliances	<p>Key appliances may include:</p> <ul style="list-style-type: none"> • cook top • oven • freestanding stove • microwave and convection oven • exhaust system • refrigerator • coffee machine • sink • dishwasher
Lighting sources	<p>Lighting sources may include:</p> <ul style="list-style-type: none"> • incandescent • fluorescent • halogen or dichroic • natural light

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB4002A Research and recommend materials, components and finishes for kitchen designs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to research and analyse materials, components and finishes and make recommendations to meet the requirements of a kitchen design brief. This unit includes evaluation of options and presentation of design information to client.
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Application of the Unit

Application of the unit	This unit of competency is applied to work conducted by kitchen designers in the specification of materials, components and finishes as part of the design process.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify requirements of kitchen design brief	1.1. Design brief is reviewed to determine required outcomes for kitchen design 1.2. Parameters for the project are assessed and confirmed 1.3. Resources are selected appropriate to work requirements and checked for operational effectiveness
2. Identify types and features of kitchen materials, components and finishes	2.1. Materials used in <i>kitchen applications</i> are examined and suitability to meet design brief determined 2.2. Components used in kitchen applications are examined and suitability to meet design brief determined 2.3. Finishes used in kitchen applications are examined and suitability to meet design brief determined 2.4. New material technologies are researched and suitability to meet design brief determined
3. Identify suitable options to meet design brief	3.1. Materials, components and finishes that meet client brief requirements are identified 3.2. Options are selected for further analysis and design development
4. Evaluate the functional and aesthetic characteristics of selection	4.1. Elements and principles of design are used to examine the appropriateness of materials, components and finishes for client brief requirements 4.2. Application methods and available expertise for the desired effect are assessed 4.3. Costs of materials, components and finishes are assessed and compared 4.4. Environmental and sustainability considerations for materials, components and finishes are examined 4.5. Aesthetic qualities are assessed with regard to desired effect 4.6. Longevity and restorability of materials, components and finishes are researched 4.7. Hazards associated with the use and application of materials, components and finishes are researched 4.8. Quality of materials, components and finishes are assessed
5. Select and	5.1. Materials, components and finishes are selected to

ELEMENT	PERFORMANCE CRITERIA
recommend materials, components and finishes	meet client brief requirements 5.2. Presentation of research information is made, highlighting the findings and rationale for selection 5.3. A range of <i>presentation strategies</i> is included in presentation
6. Document recommendations	6.1. Specifications of selection are documented 6.2. Samples are stored for further use 6.3. Selection is integrated into design drawings and plans

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Accessing and interpreting workplace information
- Applying safety procedures
- Applying research techniques
- Collecting, organising and understanding information related to work briefs, basic plans and safety procedures
- Communicating ideas and information
- Accurately recording and maintaining information
- Using computer operations for internet access and searches
- Analysing performance characteristics
- Comparing findings
- Communicating with suppliers
- Maintaining accurate records
- Clarifying and checking task-related information
- Carrying out work according to occupational health and safety (OHS) practices
- Recognising and responding to circumstances outside instructions or personal competence
- Using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- Maintaining current knowledge of materials and components used in kitchens
- Using the workplace technology related to the use of tools including calculators, measuring and recording devices

Required knowledge

- Features of kitchen materials and components
- State or territory OHS legislation, regulations, standards and codes of practice relevant to kitchen designs
- Information resources
- Elements and principles of design
- Research techniques
- Effects of finishes and finishing techniques
- Procedures for the recording, reporting and maintenance of workplace records and information
- Appropriate mathematical procedures for estimation and measurement
- Environmental protection requirements
- Established communication channels and protocols
- Problem identification and resolution techniques

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Interpret and analyse kitchen design brief • Research information on kitchen materials, components and finishes • Select and specify kitchen materials, components and finishes
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • work related information resources
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that

EVIDENCE GUIDE	
	<p>competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <ul style="list-style-type: none">• Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Design brief

Design brief may include:

- client needs and objectives
- milestones
- functional requirements
- budget, timelines and consultation requirements
- colour requirements

Parameters

Parameters may include:

- budget range
- colour range
- timelines
- space dimensions
- structural characteristics
- services

Resources

Resources may include:

- computers, computer software, design software, computer-aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment

Materials

Materials may include:

- particleboard
- high moisture resistant particleboard
- plywood
- high pressure laminate
- low pressure laminate
- vinyl/foil wrap
- resin-based solid surfaces
- solid stone
- reconstituted stone
- timber

RANGE STATEMENT	
	<ul style="list-style-type: none"> • timber veneer • paint • glass • stainless steel • tiles
Kitchen applications	<p>Kitchen applications may include:</p> <ul style="list-style-type: none"> • bench tops • splashbacks • drawers • cabinets • kickboards/plinths/legs • floors • walls • shelving
Components	<p>Components may include:</p> <ul style="list-style-type: none"> • taps • handles • runners • hinges • rails • sinks • baskets
Finishes	<p>Finishes may include:</p> <ul style="list-style-type: none"> • edging and edge profiles • paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures
Elements and principles of design	<p>Elements and principles of design may include:</p> <ul style="list-style-type: none"> • line, shape, form, texture and colour • balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, emphasis, proximity, alignment, space, ergonomics, arrangement, aesthetic relations, tension and development methods
Hazards	<p>Hazards may include:</p> <ul style="list-style-type: none"> • toxins and gases released by some finishes • glues and materials which may be harmful to

RANGE STATEMENT	
	people if not used correctly
Presentation strategies	Presentation strategies may include: <ul style="list-style-type: none"> • materials and concept boards • swatches and samples • quotes • drawings • models • plans

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB4003A Identify and document services required to support fitted furniture designs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to assess available services and determine service requirements to achieve new fitted furniture design proposals. It includes determining and documenting service requirements in order to achieve new designs such as those for a kitchen or bathroom application.
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Application of the Unit

Application of the unit	<p>This unit of competency applies to work conducted by designers in the determination of service requirements for fitted furniture applications such as kitchens and bathrooms.</p> <p>This unit applies to the assessment of services such as plumbing, gas and electricity supply, air conditioning, ventilation, lighting and data to determine implications for new designs.</p> <p>The application of this unit is limited to determining the service requirements for a design including location, number and types of taps, power outlets, exhausts, and so on, for a kitchen or bathroom space. The unit does not include layout of service pipes, wiring, conduits, and so on, or installation of services.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Identify and document available services</p>	<p>1.1. Access is arranged with client</p> <p>1.2. On-site occupational health and safety (OHS) procedures are followed</p> <p>1.3. Plumbing, water outlets and drainage features are located and documented on site diagrams or plans</p> <p>1.4. Electrical and data outlets are located and documented on site diagrams or plans</p> <p>1.5. Location and type of lighting sources are located and documented on site diagrams or plans</p> <p>1.6. Type and capacity of services are identified and details documented</p> <p>1.7. Measurements are taken to inform layout documentation</p> <p>1.8. Industry symbols and protocols are used to document information about services</p>
<p>2. Examine implications of services on design</p>	<p>2.1. Design brief, drawings and plans are examined to determine intentions or options for services</p> <p>2.2. Details obtained from site are assessed against design information</p> <p>2.3. Appliances identified in the design brief are identified and implications on services examined</p> <p>2.4. Compliance issues relating to the location of services are identified</p> <p>2.5. Implications of current services on design are determined</p>
<p>3. Determine and document lighting and electrical system layout</p>	<p>3.1. Requirements of the lighting and electrical system layout are ascertained from the design brief</p> <p>3.2. Lighting is assessed for effect and suitability to functional and ambience requirements</p> <p>3.3. Performance and characteristics required of electrical products are assessed and reviewed</p> <p>3.4. Environmental considerations are analysed in respect of the lighting and electrical system layout</p> <p>3.5. Ergonomic, anthropometric and proxemic principles are assessed in respect of the lighting and electrical system layout and the intended products</p> <p>3.6. Costs associated with purchasing and obtaining the products are analysed and documented</p> <p>3.7. Electrical contractors are consulted as required to</p>

ELEMENT	PERFORMANCE CRITERIA
	confirm implications on design 3.8. Lighting and electrical system layout is determined to meet the design brief
4. Determine and document plumbing system layout	4.1. Requirements of the plumbing system are ascertained from the design brief 4.2. Performance and characteristics required of <i>plumbing products</i> are assessed and reviewed 4.3. Gas requirements are determined and included in system layout 4.4. Environmental considerations are analysed in respect of the plumbing system layout 4.5. Ergonomic, anthropometric and proxemic principles are assessed in respect of the plumbing system layout and the intended products 4.6. Costs associated with purchasing and obtaining the products are analysed and documented 4.7. Plumbing contractors are consulted as required to confirm implications on design 4.8. Plumbing layout is determined to meet the design brief
5. Complete layout documentation	5.1. <i>Sketches and drawings</i> are completed to identify the layout of electrical and lighting system and products 5.2. Sketches and drawings are completed to identify the layout of plumbing system and products 5.3. Sketches and drawings are completed to industry standards 5.4. Specifications are documented according to industry standards

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Accessing and interpreting workplace information
- Interpreting and applying workplace terminology and documentation protocols
- Measuring
- Accessing information on electrical, lighting and plumbing systems
- Interpreting user manuals
- Documentation skills
- Mathematical skills for estimating quantities
- Applying safety procedures
- Completing sketches and drawings
- Accessing contractors

Required knowledge

- Ergonomic, anthropometric and proxemic principles
- Industry symbols and protocols
- Planning processes
- State or territory OHS legislation, regulations, standards and codes of practice relevant to the full range of determining layout for kitchen and bathroom services
- Procedures for documenting workplace records and information
- Appropriate mathematical procedures for estimation and measurement
- Environmental protection requirements
- Basic building and architectural terminology
- Range of kitchen products and service requirements
- Range of bathroom products and service requirements
- Statutory planning regulations affecting services in kitchens and bathrooms

Evidence Guide

EVIDENCE GUIDE	
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<p>Overview of assessment</p>	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Identify available services and determine issues that will impact on design • Determine layout of services required to meet design brief • Complete industry standard drawings to identify the layout of services to meet design requirements
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • tools and equipment to determine and document layout requirements • plans, drawings and manuals relating to project
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application • Assessment may be applied under project related

EVIDENCE GUIDE	
	<p>conditions (real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Lighting sources	<p>Lighting sources may include:</p> <ul style="list-style-type: none"> • incandescent • fluorescent • halogen or dichroic • natural light
Type and capacity of services	<p>Type and capacity of services may include:</p> <ul style="list-style-type: none"> • number of outlets, controls and switches • capacity to service kitchen appliances and products • capacity to service bathroom appliances and products • capacity of household electrical load • adequacy of lighting
Implications of current services on design	<p>Implications of current services on design may include:</p> <ul style="list-style-type: none"> • requirements for relocation • relative costs associated with relocation • requirements for capacity increase • relative costs associated with increasing capacity • changes required for fixtures and fittings
Performance and characteristics	<p>Performance and characteristics may include:</p> <ul style="list-style-type: none"> • assessment of products to determine if they meet the requirements of the intended end use application and how well they do it • the durability and composition of the product
Electrical products	<p>Electrical products may include:</p> <ul style="list-style-type: none"> • refrigerator • stove • appliances

RANGE STATEMENT	
	<ul style="list-style-type: none"> • air conditioners • ventilation systems • hot water systems
Environmental considerations	<p>Environmental considerations may include:</p> <ul style="list-style-type: none"> • how the use of raw materials effects the ecology and environment and how its continued use will affect the area it has been sourced from • energy consumption in achieving the material • greenhouse gases created • waste levels • resource utilisation and transport effects • what impact will be felt by reducing or stopping material from the source
Costs	<p>Costs may include:</p> <ul style="list-style-type: none"> • the cost of contractors, products and materials together with the cost of obtaining them either locally, interstate or overseas
Plumbing products	<p>Plumbing products may include:</p> <ul style="list-style-type: none"> • water filters • tap ware and sinks • drainage • dishwasher • shower recesses • baths and spas • toilet and bidet • washing machines
Sketches and drawings	<p>Sketches and drawings may include:</p> <ul style="list-style-type: none"> • hand drawn images or ideation drawings completed freehand • drafted technical drawings • drawings produced on computer using computer-aided drafting (CAD) software packages

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB4004A Determine spatial planning considerations for bathroom design

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to examine space requirements and usage patterns for bathrooms and determine planning considerations for designs.
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Application of the Unit

Application of the unit	This unit of competency applies to work conducted by bathroom designers in the analysis of design requirements. It includes analysis of services, regulatory requirements, storage requirements and applications to determine implications for bathroom design.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine bathroom usage and traffic flow patterns	1.1. Key use zones for bathrooms are identified and prime activities and associated appliances, fixtures and fittings determined 1.2. Traffic flow patterns and considerations for space are identified
2. Examine layout options	2.1. Location of services is identified and implications for relocation determined 2.2. Range of layout options and traffic flow implications are examined 2.3. Suitability of layout options for space is analysed and limitations and benefits determined
3. Determine storage options	3.1. Storage requirements of bathrooms are identified 3.2. Storage options are examined for suitability to bathroom spaces and implications for design determined 3.3. Dimensions and space requirements of standard storage options are identified for design
4. Assess bathroom ergonomic considerations	4.1. Basic principles of ergonomics are examined and used to determine space planning implications 4.2. Requirements for working height are identified 4.3. Manual handling considerations for design are identified 4.4. Storage principles are considered to determine implications for design 4.5. Special considerations for children, older people and/or disabled people are taken into account where applicable
5. Examine requirements for bathroom appliances, fixtures and fittings	5.1. Key appliances, fixtures and fittings used in bathrooms are identified and standard dimensions, clearances and required services determined 5.2. Manufacturer guidelines and statutory regulations regarding the placement and installation of appliances, fixtures and fittings are identified and implications for design examined 5.3. Space implications for appliances, fixtures and fittings are analysed and implications for design determined
6. Determine planning considerations for	6.1. Regulations regarding the location of power outlets and lighting, and electrical work undertaken are

ELEMENT	PERFORMANCE CRITERIA
services	identified 6.2.Regulations regarding the location of plumbing outlets and plumbing work undertaken are identified 6.3.Regulations regarding the location of gas outlets and gas plumbing work undertaken are identified 6.4.Implications of service requirements on bathroom design are determined 6.5. <i>Lighting sources</i> are examined and requirements for bathroom design determined

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Accessing and interpreting workplace information
- Applying safety procedures
- Research skills
- Assessing implications
- Translating information to space planning

Required knowledge

- Features of bathroom components
- State or territory occupational health and safety (OHS) legislation, regulations, standards and codes of practice relevant to bathroom and laundry designs
- Characteristics of storage, appliance, fittings and fixtures, lighting and service options
- Information resources

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Access and interpret bathroom design information • Determine limitations and benefits of different spatial planning options used in bathroom design • Identify ergonomic considerations for bathroom designs • Identify regulatory considerations for bathroom designs • Determine the implications of appliances, fixtures, fittings, storage options and usage patterns on bathroom designs
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • work related information resources
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and

EVIDENCE GUIDE

	<p>application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Key use zones for bathrooms

Key use zones for bathrooms may include:

- cleaning
- showering
- bathing
- washing
- drying
- ironing
- toiletry
- dressing
- laundry
- storage

Considerations

Considerations may include:

- floor clearances
- traffic clearances
- space requirements for reaching, bending and crouching
- additional space requirements for areas such as dressing areas, make up areas and ironing

Range of layout options

Range of layout options relates to:

- placement of showers, baths, spas, shower screens, toilets, bidets, basins, vanities and washing areas

Storage requirements

Storage requirements may include:

- linen
- cleaning materials
- make up and personal items
- jewellery
- toiletries

Storage options

Storage options may include:

- cupboards and drawers

RANGE STATEMENT	
	<ul style="list-style-type: none"> • wire shelving • baskets • mobile storage unit • railing • shelves • pantry • swing out cupboards • extension worktops • base cupboards • overhead cupboards • fold out ironing boards
Basic principles of ergonomics	<p>Basic principles of ergonomics may include</p> <ul style="list-style-type: none"> • clearance - minimum spatial tolerances for access • reach - maximum spatial tolerances
Storage principles	<p>Storage principles may include:</p> <ul style="list-style-type: none"> • importance of items • frequency of use • function • sequence of use
Key appliances, fixtures and fittings	<p>Key appliances, fixtures and fittings may include:</p> <ul style="list-style-type: none"> • shower, shower screen and shower head • toilet and bidet • bath and spa • washing basket • washing machine, dryer and iron • vanities, taps and sinks • cabinets • towel racks
Lighting sources	<p>Lighting sources may include:</p> <ul style="list-style-type: none"> • incandescent • fluorescent • halogen or dichroic • natural light

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB4005A Research and recommend materials, components and finishes for bathroom designs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to research and analyse materials, components and finishes and make recommendations to meet the requirements of a bathroom design brief. This unit includes evaluation of options and presentation of design information to client.
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Application of the Unit

Application of the unit	This unit of competency is applied to work conducted by bathroom designers in the specification of materials, components and finishes as part of the design process.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify requirements of bathroom design brief	<p>1.1. Design brief is reviewed to determine required outcomes for bathroom design</p> <p>1.2. Parameters for the project are assessed and confirmed</p> <p>1.3. Resources are selected appropriate to work requirements and checked for operational effectiveness</p>
2. Identify types and features of bathroom materials, components and finishes	<p>2.1. Materials used in bathroom applications are examined and suitability to meet design brief determined</p> <p>2.2. Components used in bathrooms are examined and suitability to meet design brief determined</p> <p>2.3. Finishes used in bathroom applications are examined and suitability to meet design brief determined</p> <p>2.4. New material technologies are researched and suitability to meet design brief determined</p>
3. Identify suitable options to meet design brief	<p>3.1. Materials, components and finishes that meet client brief requirements are identified</p> <p>3.2. Options are selected for further analysis and design development</p>
4. Evaluate the functional and aesthetic characteristics of selection	<p>4.1. Elements and principles of design are used to examine the appropriateness of materials, components and finishes for client brief requirements</p> <p>4.2. Application methods and available expertise for the desired effect are assessed</p> <p>4.3. Costs of materials, components and finishes are assessed and compared</p> <p>4.4. Environmental and sustainability considerations for materials, components and finishes are examined</p> <p>4.5. Waterproof quality of bathroom materials, components and finishes are examined</p> <p>4.6. Aesthetic qualities are assessed with regard to desired effect</p> <p>4.7. Longevity and restorability of materials, components and finishes are researched</p> <p>4.8. Hazards associated with the use and application of materials, components and finishes are researched</p> <p>4.9. Quality of materials, components and finishes are</p>

ELEMENT	PERFORMANCE CRITERIA
	assessed
5. Select and recommend materials, components and finishes	5.1. Materials, components and finishes are selected to meet client brief requirements 5.2. Presentation of research information is made, highlighting the findings and rationale for selection 5.3. A range of <i>presentation strategies</i> is included in presentation
6. Document recommendations	6.1. Specifications of selection are documented 6.2. Samples are stored for further use 6.3. Selection is integrated into design drawings and plans

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Accessing and interpreting workplace information
- Applying safety procedures
- Applying research techniques
- Collecting, organising and understanding information related to work briefs, basic plans and safety procedures
- Communicating ideas and information
- Accurately recording and maintaining information
- Using computer operations for internet access and searches
- Analysing performance characteristics
- Comparing findings
- Communicating with suppliers
- Maintaining accurate records
- Clarifying and checking task-related information
- Carrying out work according to occupational health and safety (OHS) practices
- Recognising and responding to circumstances outside instructions or personal competence
- Using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- Maintaining current knowledge of materials and components used in bathrooms
- Using the workplace technology related to the use of tools including calculators, measuring and recording devices

Required knowledge

- Features of bathroom materials and components
- State or territory OHS legislation, regulations, standards and codes of practice relevant to bathrooms designs
- Information resources
- Elements and principles of design
- Research techniques
- Effects of finishes and finishing techniques
- Procedures for the recording, reporting and maintenance of workplace records and information
- Appropriate mathematical procedures for estimation and measurement
- Environmental protection requirements
- Established communication channels and protocols
- Problem identification and resolution techniques

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Interpret and analyse bathroom design brief • Research information on bathroom materials, components and finishes • Select and specify bathroom materials, components and finishes
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • work related information resources
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process • Assessment must confirm a reasonable inference that

EVIDENCE GUIDE	
	<p>competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <ul style="list-style-type: none">• Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Design brief	<p>Design brief may include:</p> <ul style="list-style-type: none"> • client needs and objectives • milestones • functional requirements • budget, timelines and consultation requirements • colour requirements
Parameters	<p>Parameters may include:</p> <ul style="list-style-type: none"> • budget range • colour range • timelines • space dimensions • structural characteristics • services
Resources	<p>Resources may include:</p> <ul style="list-style-type: none"> • computers, computer software, design software, computer-aided drafting (CAD) software, colour boards, storyboards, swatches, Pantone Matching System (PMS), journals (directions magazines), artistic equipment and products and model making equipment
Materials	<p>Materials may include:</p> <ul style="list-style-type: none"> • particleboard • high moisture resistant particleboard • plywood • high pressure laminate • low pressure laminate • vinyl/foil wrap • resin-based solid surfaces • solid stone • reconstituted stone • timber

RANGE STATEMENT	
	<ul style="list-style-type: none"> • timber veneer • paint • glass • stainless steel • tiles
Bathrooms applications	<p>Bathroom applications may include:</p> <ul style="list-style-type: none"> • bench tops • splashbacks • drawers • cabinets • kickboards/plinths/legs • floors • walls • shelving • showers • baths/spas
Components	<p>Components may include:</p> <ul style="list-style-type: none"> • taps • handles • runners • hinges • rails • sinks • baskets • toilets • bidets
Finishes	<p>Finishes may include:</p> <ul style="list-style-type: none"> • edging and edge profiles • paints, waxes, lacquers, stains, pigments, oils, plastic coatings, veneers, ceramics, stone, glass, textiles and other textures • waterproofing finishes
Elements and principles of design	<p>Elements and principles of design may include:</p> <ul style="list-style-type: none"> • line, shape, form, texture and colour • balance, proportion (symmetry, asymmetry), harmony, contrast, pattern, movement, rhythm, unity, style, focus, scale, emphasis, proximity, alignment, space, ergonomics, arrangement,

RANGE STATEMENT	
	aesthetic relations, tension and development methods
Hazards	<p>Hazards may include:</p> <ul style="list-style-type: none"> • toxins and gases released by some finishes • glues and materials which may be harmful to people if not used correctly
Presentation strategies	<p>Presentation strategies may include:</p> <ul style="list-style-type: none"> • materials and concept boards • swatches and samples • quotes • drawings • models • plans

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB4006A Prepare quotation and contract documentation for design project

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to calculate costs for a design project and prepare formal quotation and contract documentation for client agreement. This unit includes evaluation of costing options and presentation of documentation to client.
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Application of the Unit

Application of the unit	This unit of competency applies to work conducted by designers for the quotation and contracting of projects including materials, components and services as part of the design implementation.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify costs involved in producing design	1.1. <i>Design brief</i> is reviewed to confirm required outcomes and inclusions and any other client requirements 1.2. Measurements and quantities are confirmed 1.3. Specification schedule is developed to itemise all inclusions 1.4. <i>Labour resources</i> and suppliers are identified and role in design implementation confirmed
2. Calculate project costs	2.1. Costs of materials, components and finishes are calculated 2.2. Labour costs, including design fees are calculated 2.3. <i>Overheads and hidden costs</i> are calculated 2.4. Costs of required plant and equipment are calculated 2.5. Supplier prices are compared to ensure most cost effective solutions 2.6. Options for reducing costs are identified
3. Prepare and present cost quotation	3.1. Costs are itemised and detailed on documentation according to industry standards 3.2. <i>Additional information</i> and samples are prepared as required to support quotation 3.3. Quote is presented to the client and details and costing options discussed to confirm all items documented 3.4. Quote is modified and finalised according to client response 3.5. Client agreement to the quote is obtained and documented
4. Prepare and present contract documentation	4.1. Inclusions, costs and parameters of the design are noted in the <i>contract documents</i> 4.2. Contract is prepared according to industry standards and presented and explained to client

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Accessing and reading workplace information including diagrams, drawings and design plans
- Applying safety procedures
- Applying research techniques
- Collecting, organising and understanding information related to design projects, costing schedules and contract preparation
- Communicating and negotiating ideas and information
- Accurately recording and maintaining information
- Using computer operations for internet access and searches
- Performing costing calculations
- Communicating with suppliers
- Clarifying and checking design-related information
- Carrying out work according to occupational health and safety (OHS) practices
- Using mathematical ideas and techniques to correctly complete measurements, calculate area and volume, and estimate other material requirements
- Maintaining current knowledge of materials and components used in design projects
- Using the workplace technology related to the use of tools including calculators, measuring and recording devices

Required knowledge

- State or territory OHS legislation, regulations, standards and codes of practice relevant to design contracts
- Information resources
- Research techniques
- Market rate for design fees, labour costs and material costs
- Appropriate mathematical procedures for estimation, costing and measurement
- Established communication channels and protocols
- Problem identification and resolution techniques
- Types of labour available

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Interpret and analyse design brief • Itemise inclusions and resources required for project implementation • Calculate costs for all components • Research information on prices and suppliers • Produce a quote that documents all costs • Complete contract documentation • Present quote and contract to client in a manner that informs the client of their choices and the details of the inclusions
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • work related information resources
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and

EVIDENCE GUIDE

	<p>application</p> <ul style="list-style-type: none">• Assessment may be applied under project related conditions (real or simulated) and require evidence of process• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Design brief

Design brief may include:

- client needs and objectives
- milestones
- functional requirements
- budget, timelines and consultation requirements
- colour requirements
- specific inclusions

Labour resources

Labour resources may include:

- trades people
- contract services
- labourers

Overheads and hidden costs

Overheads and hidden costs may include:

- costs of providing service
- business overheads
- transport and delivery
- sales and marketing costs
- time delays or other timing factors
- demolition and rubbish removal costs
- supplier cost increases

Additional information

Additional information may include

- fliers and promotional information
- product samples
- drawings and plans
- product codes
- insurance information

Contract documents

Contract documents may include

- drawings
- plans
- project schedules

RANGE STATEMENT	
	<ul style="list-style-type: none"> • specification schedules • visual information

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB4007A Design ancillary residential cabinetry

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to identify client requirements for residential cabinetry outside of kitchen, bathroom and laundry applications including developing and documenting designs to inform production and installation processes.
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Application of the Unit

Application of the unit	This unit of competency applies to cabinet makers and designers who provide designs for custom built cabinets for installation in residential situations.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine design requirements	1.1. <i>Client requirements</i> for <i>ancillary cabinetry</i> are identified and verified with the client 1.2. <i>Design parameters</i> are determined 1.3. Site measurements are taken and recorded 1.4. Design requirements and client information are documented
2. Develop design options	2.1. <i>Drawings</i> are completed to visually represent cabinet design ideas 2.2. Cabinet design ideas and <i>options</i> are discussed with client 2.3. Client preferences are determined and design option selected with the client
3. Develop design proposal	3.1. Measurements and dimensions are documented 3.2. <i>Structural features</i> and <i>components</i> are identified 3.3. <i>Construction and installation requirements</i> are determined 3.4. Labour requirements are determined 3.5. Costs involved to implement design are calculated 3.6. Design proposal is developed and specifications documented 3.7. <i>Design documentation</i> and quote is provided for client consideration

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Accessing and interpreting workplace information
- Applying safety procedures
- Conducting measurements and calculations
- Completing drawings
- Interpreting client requirements

Required knowledge

- Processes used for the construction and installation of cabinets
- Features and limitations of cabinets and components
- State or territory occupational health and safety (OHS) legislation, regulations, standards and codes of practice relevant to cabinets and components
- Information resources
- Costing techniques

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Liaise with client to establish design requirements • Develop design options • Take and document cabinet measurements • Complete design documentation including drawings and specifications • Confirm design detail with client
<p>Context of and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • work related information resources
<p>Method of assessment</p>	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application • Assessment may be applied under project related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE

- Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Client requirements

Client requirements may include:

- location and fit
- measurements and dimensions
- purpose
- materials and finishes
- structural features
- budget
- timing

Ancillary cabinetry

Ancillary cabinetry may include:

- built-in entertainment units
- built-in cupboards
- shelving
- external kitchen components
- bathroom cabinets

Design parameters

Design parameters may include:

- quality finish
- relationship with other features of the room
- structural and functional requirements and limitations
- colour, style and tone

Drawings

Drawings may include:

- computer-aided drawings
- manual drawings
- sketches

Options

Options may include:

- materials
- structural features
- options to reduce costs
- variety of ways to achieve client requirements

RANGE STATEMENT	
Structural features	Structural features may include: <ul style="list-style-type: none"> • doors, shelving, drawers and rails • openings • legs, plinths and kickboards
Components	Components may include: <ul style="list-style-type: none"> • handles, knobs and drawers • hinges and runners
Construction and installation requirements	Construction and installation requirements may include: <ul style="list-style-type: none"> • use of screws, fixtures and patented devices • use of adhesives, clips and fasteners • use of sealants • material requirements • manufacturing processes • on-site production requirements • special production requirements such as use of specialised equipment • removal of furnishings • waste removal
Design documentation	Design documentation may include: <ul style="list-style-type: none"> • drawings • specifications • construction information • timelines • product codes and specifications • delivery details • special conditions • measurements and dimensions

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFKB4008A Determine layout for laundry components

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to design and document the layout for a laundry, including placement of components such as cabinets, appliances and required laundry facilities. It requires an application of design principles to spatial considerations for a laundry.
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Application of the Unit

Application of the unit	This unit of competency applies to residential laundry design and may include the positioning of services and appliances and desired locations for plumbing and electrical outlets. The unit does not include designing any changes to plumbing, electrical or waterproofing, other than the location of required service.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Confirm and analyse the laundry design requirements	1.1. Communication is established with the client and information regarding the client needs and expectations is obtained 1.2. Key requirements for laundry are assessed and confirmed and constraints determined 1.3. Project parameters are confirmed 1.4. Site analysis is conducted to assess laundry design requirements and limitations 1.5. Spatial considerations are determined specific to the site and client requirements
2. Examine layout options	2.1. Location of current services are identified 2.2. Components for inclusion in laundry are identified 2.3. Range of layout options and traffic flow implications are examined 2.4. Suitability of layout options for space is analysed and limitations and benefits determined 2.5. Environmental implications of the layout are assessed and options reviewed to ensure maximum energy efficiency is achieved 2.6. Access issues relating the laundry are identified and addressed in layout options
3. Select and specify laundry layout	3.1. Layout options are discussed with client and preferences selected 3.2. Required changes to service outlets and waterproofing are identified 3.3. Regulatory requirements relating to laundries are assessed to determine compliance 3.4. Laundry layout and components are documented with specifications detailed 3.5. Cost estimate is calculated and provided for client 3.6. Proposal is communicated effectively to the client and alterations negotiated and confirmed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Accessing and interpreting workplace information
- Applying safety procedures
- Communicating with clients
- Generating ideas
- Analysing
- Measuring and calculating
- Costing and associated calculations
- Negotiation skills
- Drawing skills
- Accurately recording and maintaining information relating to the project

Required knowledge

- Features of laundry designs and components
- State or territory occupational health and safety (OHS) legislation, regulations, standards and codes of practice relevant to laundry designs
- Characteristics of storage, appliance and service options
- Spatial planning considerations for laundry designs
- Information resources
- Drawing protocols and symbols

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	<p>Assessment processes and techniques must be culturally appropriate and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed.</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<ul style="list-style-type: none"> • Work with the client to develop and confirm a laundry design brief • Apply spatial considerations to laundry design • Develop laundry layout to meet client brief • Apply regulatory considerations for laundry designs • Document laundry design in drawings and specifications
Context of and specific resources for assessment	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • work tools and equipment • work related information resources
Method of assessment	<ul style="list-style-type: none"> • Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure correct interpretation and application • Assessment may be applied under project related

EVIDENCE GUIDE

	<p>conditions (real or simulated) and require evidence of process</p> <ul style="list-style-type: none">• Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances• Assessment may be in conjunction with assessment of other units of competency
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Key requirements

Key requirements may include:

- functional requirements
- colour, style and form preferences
- inclusions
- budget
- timelines
- desired effects
- materials, component and finishes
- quality
- specific conditions

Project parameters

Project parameters may include:

- upper and lower budget limits
- range of options
- specific conditions
- scope of brief
- approval to make changes
- design effect required by client
- functionality (short and long term)
- established timelines

Site analysis

Site analysis may include:

- identifying current laundry features and services
- measuring laundry dimensions and features
- identifying structural conditions and features of current laundry layout or which require building or engineering advice in a new laundry design
- observing general house style
- observing current inclusions and appliances

Spatial considerations

Spatial considerations may include:

- location and capacity of services

RANGE STATEMENT	
	<ul style="list-style-type: none"> • requirements of laundry appliances • usage and traffic flows typical to a laundry • laundry storage requirements • specific ergonomic or access requirements
Components	<p>Components may include:</p> <ul style="list-style-type: none"> • washing machine, dryer, ironing facilities, laundry sink and hanging facilities • storage areas, cabinets and shelving • tiling, fixtures and fittings • shower, shower screen, toilet and basin
Access issues	<p>Access issues may include:</p> <ul style="list-style-type: none"> • access for wheelchair and walking support devices • railing and supports • ergonomics required for specific disability, aging, and/or health issues
Documentation	<p>Documentation may include:</p> <ul style="list-style-type: none"> • product information • client information • sketches, drawings - elevations, sections, plans and perspectives • photos • brochures • computer-aided design presentations
Specifications	<p>Specifications may include:</p> <ul style="list-style-type: none"> • measurements and dimensions • fixtures and fittings • product codes • materials • components • appliances

Unit Sector(s)

Unit sector	Kitchens and bathrooms
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMB1001B Complete a basic mattress and base product

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to construct, assemble and finish a basic mattress and base product.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including design variations, tolerances, process, materials, finish and quantity 1.2. Fabrication and assembly sequence is planned 1.3. Procedures are determined for checking quality at each stage of the process 1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.5. Suitable work area is selected for the task 1.6. Preparatory drawings/set-outs for tasks are confirmed 1.7. Materials are selected following work instructions 1.8. Tools and equipment suitable for fabrication are identified and checked for safe and effective operation
2. Complete fabrication	2.1. Material is prepared and set out according to work instructions and components are marked according to workplace procedures 2.2. Tools, machines and equipment are used in accordance with safety requirements and manufacturer specifications 2.3. Components are prepared and checked against set-out and job requirements 2.4. Components are fabricated using fastenings and adhesives 2.5. Assembly process is undertaken according to workplace procedures 2.6. Fabricated product is checked for compliance with specifications 2.7. Item is finished in accordance with work instructions
3. Finalise operation and maintain equipment	3.1. Work area is cleaned and hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures 3.2. Off-cuts and unused materials are collected and stored for reuse or disposed following workplace procedures 3.3. Waste and scrap materials are dealt with following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination with site supervisor, other workers and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate fabrication problems, avoid re-working and wastage
- use the limited workplace technology related to this fabrication, including tools, equipment, materials and measuring devices

Required knowledge

- the interpretation of production plans and drawings
- workflow in relation to mattress and base fabrication
- identification of hand and/or power tools, materials, equipment, processes and procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work instructions and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - achieve required product quality
- Fabricate and finish at least one basic mattress and base product which requires the use of:
 - quilted fabric
 - mattress-making hand tools and equipment
 - springs or a spring unit
 - sewing machines
- Work effectively with others

Resource implications

Access to plans, tools, equipment, materials, a work area and a specified project.

Method of assessment

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be conducted in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances, dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work involves reading and interpreting plans, using hand and power tools, operating basic machinery, applying quality requirements and applying product finishing techniques and materials • Work is conducted under supervision and guidance
<p>Basic mattress product may include:</p>	<ul style="list-style-type: none"> • mini (dog) mattress • mattress cover • foot stool (inner spring) • headboard • mini (seat) mattress <p>Project is to be determined in consultation with supervisor/teacher.</p>
<p>Tools and equipment may include, but are not limited to:</p>	<ul style="list-style-type: none"> • measuring tapes or rules • cordless drills/screwdrivers • scissors • thread • needles • fabric cutter • foam cutter • staple lifters • hog ring pliers • files and rasps

RANGE STATEMENT	
	<ul style="list-style-type: none"> trimming knife
Machines may include, but are not limited to:	<ul style="list-style-type: none"> sewing machines
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> quilted fabric spring units foam springs timber manufactured board border wire hog rings thread needled felt stabilising springs
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> Workplace procedures relating to the use of tools and equipment Work instructions, including job sheets, plans, drawings and designs Workplace procedures relating to reporting and communication Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Mattress and Base Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMB2001B Use mattress and base sector hand and power tools

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use hand and power tools in applications relating to the mattress and base sector of the furnishing industry.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hand and power tools	1.1.Types of hand and power tools and their functions identified 1.2.Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3.Sources of power supply recognised
2. Select hand tools	2.1.Hand tools selected are consistent with needs of the job 2.2.Selected hand tools are checked for serviceability and safety and any faults reported to supervisor 2.3.Equipment is selected to hold or support material for hand tools application where applicable
3. Use hand tools	3.1.Material is located and held in position for hand tool application 3.2.Hand tools are safely and effectively used according to their intended use 3.3.Hand tools are safely located when not in immediate use
4. Select power tools	4.1.Power tools are selected consistent with needs of the job in accordance with conventional work practice 4.2.Power tools are visually checked for serviceability/safety in accordance with OHS requirements and any faults reported to supervisor
5. Use power tools	5.1.Material is located and held in position for power tool application as applicable 5.2.Power tools are safely and effectively used in application processes 5.3.Power tools are safely located when not in use
6. Clean up work area and tools	6.1.Tools are cleaned, maintained and stored 6.2.Equipment is cleaned, maintained and stored 6.3.Work area is cleared and waste removed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to hand and power tools, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate other material requirements
- use pre-checking and inspection techniques to anticipate problems, avoid re-working and wastage
- use workplace technology related to the operation and maintenance of hand and power tools

Required knowledge

- types, characteristics, uses, limitations and maintenance requirements of hand tools commonly used in mattress and base production
- types, characteristics, uses, limitations and maintenance requirements of power tools commonly used in mattress and base production
- workplace safety requirements and OHS legislation
- workflow procedures within the workplace

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical Aspects of Evidence

- Locate and apply relevant information related to hand and power tools
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Adopt and carry out correct procedures prior to and during use of hand and power tools
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource Implications

Mattress and base sector hand and power tools, materials used in the manufacturing and installation of furnishing products.

Method of Assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and should be in conjunction with assessment of other units of competency.

Context of Assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances, dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate skill, accuracy and dexterity in the application of tools to work tasks
<p>Hand tools for mattress and base making are to include:</p>	<ul style="list-style-type: none"> • scissors • screwdrivers • measuring and marking equipment • staple lifters • pliers • files and rasps • trimming knives • needles
<p>Hand tools for mattress and base making may also include:</p>	<ul style="list-style-type: none"> • hand saws • hammers • allen keys • spring benders
<p>Power tools for mattress and base making are to include:</p>	<ul style="list-style-type: none"> • staple gun • fabric cutter • foam cutter • lightening cutter • panel cutter • clip guns • glue guns • hog ring gun • long tom

RANGE STATEMENT	
	<ul style="list-style-type: none"> • sewing machines
Power tools for mattress and base may also include:	<ul style="list-style-type: none"> • nail guns • drill • jig saw • circular saw
Fault reporting	Reporting of faults in the operation of hand and power tools may be verbal or written to the appropriate person
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Mattress and Base Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFMB2002B Prepare and assemble base unit

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency for the assembly of components to construct bases for mattresses, including timber platforms, webbing, coil springs, grid wires, foam and padding.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for base assembly	1.1. Specifications are used to determine job requirements, including design, tolerances, process, materials, finish and quantity 1.2. Assembly sequence is planned 1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.4. Procedures are determined for checking quality at each stage of the process 1.5. Fixing devices are selected in line with work instructions and type of materials to be joined 1.6. Components, hardware, fittings and attachments are collected 1.7. Tools and equipment suitable to the fixing method are selected and checked for safe operation 1.8. Appropriate jigs are selected
2. Assemble base components	2.1. Components are laid out and assembled using jigs and appropriate fastenings 2.2. Hand and/or power tools, equipment are used as required 2.3. Assembled base is checked for compliance with specifications 2.4. Spring grid/unit is attached to base 2.5. Fabric is upholstered to base according to specifications 2.6. Base is finished to eliminate all excess materials 2.7. Bases which do not meet quality specifications are repaired or tagged for further processing or recycling/disposal
3. Identify quality requirements	3.1. Process is monitored and conditions which may affect quality standards are noted 3.2. Variations to normal activities are reported within workplace procedures 3.3. Authorised changes in standard operating procedures and work order or instructions are implemented 3.4. Workplace required documentation is completed and stored following appropriate procedures
4. Clean work area/s and maintain	4.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace OH&S

ELEMENT	PERFORMANCE CRITERIA
equipment	procedures 4.2. Waste and scrap is removed following workplace procedures 4.3. Tools and equipment used are cleaned, inspected for serviceable condition and stored appropriately in accordance with workplace procedures 4.4. Equipment and work area clean-up is maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid re-working and avoid wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

Required knowledge

- the interpretation of plan representation of base design
- identification of hand and/or power tools, materials, equipment, processes and procedures
- workflow in relation to base production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate relevant information
- Apply safe handling requirements for equipment and products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Assemble base components to construct at least one sprung base unit
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource implications

Access to plans, hand and/or power tools, equipment, materials, jigs, appropriate machinery, and a suitable work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope	This unit covers the assembly of components for the construction of bases for mattresses. It includes the use of timber platforms, stabilising spring, coil springs, grid wires, foam, padding and border wire
Unit context	<ul style="list-style-type: none"> • Work is carried out in accordance with statutory requirements, organisation insurance requirements, OHS legislation, environmental legislation, workplace procedures and relevant health regulations • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the assembly of bases for mattresses • Competency may be demonstrated in workplaces involved in the manufacture of mattresses, bases and furniture components
Personal protective equipment	<ul style="list-style-type: none"> • Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • measuring tapes or rules • scissors • staple gun • pincers • long-nose pliers • hammers • mallets • squares • bevels • chisels • plane • hand saws • power saws • power drills/screwdrivers

RANGE STATEMENT	
	<ul style="list-style-type: none"> • clamps and screwdrivers
Materials to be used may include, but are not limited to:	<ul style="list-style-type: none"> • timber • manufactured board • fabrics • grid wires • glues • screws • nails • dowels • coil springs • foam • padding • stabilising springs • border wire
Assembled base specification checks are to include:	<ul style="list-style-type: none"> • alignment and squareness • correct number and fitting of fasteners • hardware • fittings and attachments and conformity to work instruction and quality requirements
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Mattress and Base Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMB2003B Assemble mattress components

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to assemble specified mattresses, including the planning of work, selection of fabrics and components and the assembly of the components
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan work operations	1.1. Specifications concerning design, fabrics and finish are confirmed with designer/client, as required 1.2. Workplace health and safety requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 1.3. Suitable work area is selected, tidied and cleaned of any contaminants 1.4. Appropriate equipment and tools are selected and checked for the required fitting and assembly process
2. Select and inspect fabrics and components	2.1. Fabric panels are checked in terms of quantity, quality, contaminants, size, pattern and consistency 2.2. Grade of foam is selected and checked in accordance with work order 2.3. Appropriate padding and springs are selected and checked
3. Assemble components and fit fabric cover	3.1. Work pieces are laid out in sequence according to specifications, construction process and workplace procedures 3.2. Padding and underlay materials are attached to spring unit using appropriate enterprise techniques and equipment 3.3. Covering fabrics are applied to mattress ensuring: 3.4. Patterns, naps, sheens, direction of pattern, pattern repeat and finished side of the materials are positioned appropriate to the design 3.5. Fabric finish over the spring unit is smooth and consistent 3.6. Weaving lines are straight 3.7. Finish of applied fabric is checked against quality standards
4. Clean work area/s and maintain equipment	4.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace OHS procedures 4.2. Waste and scrap is removed following workplace procedures 4.3. Tools and equipment used are cleaned, inspected for serviceable condition and stored appropriately in accordance with workplace procedures 4.4. Equipment and work area clean-up is maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, assembly plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid re-working and wastage
- use the limited workplace technology related to the assembly, including tools, equipment, materials and measuring devices

Required knowledge

- work requirements, including workplace standards
- fabric types and characteristics, common faults and inspection procedures
- padding/underlay materials and spring units
- risks to health from repetitive actions and prevention strategies
- design features of the finished furnishing items

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Identify and select materials used and any special handling requirements for those materials
- Assemble mattress components to construct at least the following:
 - one pillow top mattress
 - one standard sprung mattress
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate equipment and tools, plain and patterned fabrics, padding materials, spring units, fixing materials and tools, work order, workplace information, including work procedures and equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

This unit covers work involving the assembly of components to produce mattresses

Materials and components may include but are not limited to:

- spring units
- plain and patterned fabric
- padding materials
- foam

Unit context

- Work is carried out in accordance with statutory requirements, organisation insurance requirements, OHS legislation, environmental legislation, manual handling procedures and relevant health regulations
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the assembly of mattress components
- Work may be performed in workplaces which are involved in the manufacture or restoration of mattresses and base units

Tools and equipment may include, but are not limited to:

- glues
- staples
- buttons
- scissors
- measuring and marking equipment
- staple lifters
- pliers
- trimming knife
- needles
- spring benders
- clip guns
- staple guns
- glue guns
- long tom
- foam cutter
- fabric cutter

RANGE STATEMENT	
	<ul style="list-style-type: none"> • sewing machines
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operations of tools • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Mattress and Base Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFMB2004B Cut mattress and base fabrics

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to lay out patterns and cut fabrics ready for construction of mattresses and bases.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan work operations	1.1. Specification sizes are read and interpreted to identify required fabrics, number of items to be cut and required equipment 1.2. Cutting requirements or other instructions are noted and required guides on the cutting table are identified 1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.4. Suitable work area is selected, tidied and cleaned of any contaminants 1.5. Appropriate equipment and tools are selected for the fabrics and type of materials 1.6. Scissors and any other cutting equipment appropriate for the fabric are selected and checked prior to use for sharpness, set operation and safe condition
2. Prepare materials for cutting	2.1. Fabrics are selected to suit application, inspected for flaws and appropriate finish 2.2. Naps, direction of pattern, pattern repeat and finished side of the materials are identified 2.3. Fabrics are laid out smooth and square ready for cutting 2.4. Patterns are laid out following work procedures and instructions using location marks on the pattern and other instructions to match specifications 2.5. Measurements are made and appropriate adjustments are made 2.6. Tools and equipment are checked for operation
3. Complete cutting operations	3.1. Required cutting operations are completed to cut out materials following work instructions 3.2. Cut fabrics are folded, protected and despatched to next process following workplace procedures 3.3. Unused materials are stored as required 3.4. Workplace required documentation is completed and stored following appropriate procedures 3.5. Work area is cleaned and damaged tools tagged as required 3.6. Waste is collected and bundled for recycling/reuse as required 3.7. Tools and equipment are cleaned, maintained and returned to storage area

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use workplace technology related to the layout out of pattern and cutting fabrics, including tools, equipment, materials and measuring devices

Required knowledge

- fabric types, common faults and inspection procedures
- design features of finished mattress and/or base items related to laying out patterns and cutting fabrics
- work requirements, including workplace standards
- risks to health from repetitive actions and prevention strategies

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling practices for equipment, products and materials
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Identify materials used and any special cutting requirements
- Measure accurately and cut fabrics to required size and accuracy covering at least three different fabric types or pattern styles
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate fabric cutters, scissors and tools, fabrics, work order, workplace information, including work procedures and equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • This unit covers work involving cutting single or multi layer fabrics by hand or automatic method according to specifications and pattern • This unit applies to fabrics and where matching involves naps, direction of pattern and pattern repeats
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and safe operating procedures or equivalent • Work is carried out in accordance with statutory requirements, organisation insurance requirements, environmental legislation, manual handling procedures and relevant health regulations • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the cutting of material. This may be demonstrated either individually or in a team environment
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • scissors • cutting blades • fabric cutter
Materials to be cut may include but are not limited to:	<ul style="list-style-type: none"> • plain and patterned fabric
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices</p>
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, patterns, drawings and designs • Workplace procedures relating to reporting

RANGE STATEMENT	
	and communication

Unit Sector(s)

Unit sector	Mattress and Base Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMB3001B Assemble springs for mattresses

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to assemble springs for mattresses and bases.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan work operations	1.1. Specifications for assembly of springs are confirmed, including: 1.2. number of springs for size of mattress 1.3. type of springs for application 1.4. layout of springs 1.5. assembly procedures 1.6. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.7. Suitable work area is selected, tidied and cleared of any contaminants 1.8. Appropriate equipment and tools are selected and checked for the required fitting and assembly process
2. Operate machinery to assemble spring units	2.1. Machine is checked for safe and effective operation. 2.2. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions 2.3. Machine start up procedures are carried out in accordance with manufacturer instructions 2.4. Machine is operated in accordance with its designated capacity and purpose, tooling requirements and to manufacturer recommendations 2.5. Springs are machine joined in accordance with manufacturer instructions, safe handling procedures and standard workplace operating procedures 2.6. Machine operation is monitored to ensure springs are assembled to job specifications and quality requirements 2.7. Problems with the required work and/or operation of the machine are identified and reported to the appropriate person
3. Clean up work area and maintain equipment	3.1. Items that do not meet quality requirements are recycled or discarded according to workplace procedures 3.2. Materials that can be reused are collected and stored 3.3. Waste and scrap is removed following workplace procedures 3.4. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures

ELEMENT	PERFORMANCE CRITERIA
	3.5. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures 3.6. Equipment and tooling is maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to assembling springs, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate problems, avoid re-working and avoid wastage
- use workplace technology related to the operation and maintenance of the spring coiling machine or spring assembly machine

Required knowledge

- work requirements, including workplace standards
- spring assembly procedures, common faults and inspection procedures
- spring assembly types and their application
- risks to health from repetitive actions and prevention strategies

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order, locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify and select materials used and any special handling requirements for those materials
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Produce and assemble a spring unit using border wire, stabilising springs and coil springs
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate equipment and tools, springs, work order, workplace information, including work procedures and equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit covers work involving the assembly of springs for mattresses and bases
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislation obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the assembly of springs • Work will be performed in workplaces which are involved in the manufacture and/or restoration of mattresses and bases
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • long nose pliers • spring coiling machine or spring assembly machine
Materials to be applied may include, but are not limited to:	<ul style="list-style-type: none"> • coil springs • spiral springs • border wire • stabilising springs • grid wire
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices.
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures to the use of tools and equipment • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures/relating relating to

RANGE STATEMENT	
	reporting and communication <ul style="list-style-type: none"> • Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Mattress and Base Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMB3002B Make springs for mattresses and bases

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use coiling machines and related tools and materials to produce springs for mattresses and bases.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan work operations	1.1. Specifications for springs are confirmed, including: <ul style="list-style-type: none"> 1.1.1. type of spring required 1.1.2. spring tension 1.1.3. spring positioning 1.1.4. wire type and diameter 1.1.5. coil count 1.2. Workplace health and safety requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 1.3. Suitable work area is selected, tidied and cleaned of any contaminants 1.4. Appropriate equipment and tools are selected and checked for the required spring coiling process
2. Operate machinery to make springs	2.1. Machine is checked for safe and effective operation 2.2. Machine settings and adjustments are made in accordance with job requirements and, machine and tool manufacturer instructions 2.3. Machine start-up procedure is carried out in accordance with manufacturer instructions 2.4. Machine is operated in accordance with its designed capacity and purpose, tooling requirements and to manufacturer recommendations 2.5. Material is fed into machine in accordance with manufacturer instructions, safe handling procedures and standard workplace operating procedures 2.6. Machine operation is monitored to ensure springs are produced to job specifications and quality requirements 2.7. Problems with the required work and/or the operation of the machine are identified and reported to appropriate persons
3. Clean up work area and maintain equipment	3.1. Items that do not meet quality requirements are recycled or discarded according to workplace procedures 3.2. Material that can be reused is collected and stored 3.3. Waste and scrap is removed following workplace procedures 3.4. Equipment and work area are cleaned and inspected for serviceable condition in accordance with

ELEMENT	PERFORMANCE CRITERIA
	workplace procedures 3.5. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures 3.6. Equipment and tooling is maintained in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to spring making, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate problems, avoid re-working and wastage
- use workplace technology related to the operation and maintenance of the spring coiling machine

Required knowledge

- work requirements, including workplace standards
- spring types and characteristics, common faults and inspection procedures
- types of wire and their application
- risks to health from repetitive actions and prevention strategies

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify and select materials used and any special handling requirements for those materials
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Produce one of the following three types of springs:
 - coil springs
 - spiral springs
 - stabilising springs
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate equipment and tools, including a coiling machine, wire, work order; workplace information, including work procedures and equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit covers work involving the making of springs for mattresses and bases.
Unit context	<ul style="list-style-type: none"> • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the making of springs • Work is carried out in accordance with statutory requirements, organisation insurance requirements, OHS legislation, environmental legislation, manual handling procedures and relevant health regulations • Work may be performed in workplaces which are involved in the manufacture or restoration of mattresses and bases
Tools and equipment	<ul style="list-style-type: none"> • Tools and equipment are to include spring coiling machine and related tools
Materials	Materials include but may not be limited to helical wire
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operations of tools • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Mattress and Base Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMB3003B Set up, operate and maintain a tape edging machine

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up operate and maintain a tape edging machine which uses automated processes to apply and finish edge on mattresses and bases.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan work operations	<p>1.1. Work instructions are used to determine job requirements, including quality, materials, equipment and quantities</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed through the work</p> <p>1.3. Material for processing is selected and inspected for quality</p> <p>1.4. Machine and the tape holder unit are identified and checked for safe and effective operation</p> <p>1.5. Procedures are determined for minimising waste material</p> <p>1.6. Procedures are identified for maximising energy efficiency while completing the job</p>
2. Set up machines	<p>2.1. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions</p> <p>2.2. Trial runs are conducted to check machine operation, accuracy and quality of finished work</p> <p>2.3. Necessary adjustments are made to machine settings</p>
3. Complete tape edging	<p>3.1. Machine start-up procedure is carried out in accordance with manufacturers' instructions</p> <p>3.2. Material is fed into machine in accordance with manufacturers' instructions, tooling requirements, safe handling procedures and standard workplace operating procedures</p> <p>3.3. Machine is operated in accordance with its designed capacity and purpose, and to manufacturer recommendations</p> <p>3.4. Machine operation, including inputs and outcomes, is monitored to ensure product quality and output</p> <p>3.5. Waste quantities are checked and minimised</p> <p>3.6. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures</p> <p>3.7. Problems with the required work or the operation of the machine are identified and reported to appropriate persons</p>
4. Clean up work area and maintain	<p>4.1. Material that can be re-used is collected and stored</p> <p>4.2. Waste and scrap is removed following workplace</p>

ELEMENT	PERFORMANCE CRITERIA
equipment	procedures 4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures 4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures 4.5. Operator maintenance is completed in accordance with manufacturer specifications and site procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to tape edging, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate other material requirements
- use pre-checking and inspection techniques to anticipate set up, operating and maintenance problems, avoid re-working and wastage
- use workplace technology related to semi-automated or automated tape edging machines, including tooling, equipment and accuracy devices

Required knowledge

- the types, characteristics, uses and limitations of the machines
- characteristics, uses and limitations of fabric and edging tape
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Identify, set up and operate a semi-automated or automated tape edging machine to complete the following:
 - the set up and application of at least one edge treatment material
 - the identification and correction of at least two real or simulated machining faults
- Conduct operator maintenance on the machine and equipment
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource implications

Access to a semi-automated or automated tape edging machine, including tooling equipment and accuracy devices.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace

EVIDENCE GUIDE	
	simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	Work involves applying and processing a tape edge to a mattress or base
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances, dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate skill, accuracy, dexterity and problem solving skills in the set up and operation of machines • Work will be performed in workplaces which are involved in the manufacture or restoration of mattresses and bases
Tape edging machine	<ul style="list-style-type: none"> • Automated tape edging machines use automated processes to apply and finish edge treatments • Machines are to include either semi-automated or fully automated tape edging machines
Materials to be processed may include but are not limited to:	<ul style="list-style-type: none"> • plain and patterned quilted fabric • edging tape
Operator maintenance	Operator maintenance is to include the cleaning and refurbishing of the tape edging head unit and tape holder
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices.
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operations of tools

RANGE STATEMENT

	<ul style="list-style-type: none"> • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures
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Unit Sector(s)

Unit sector	Mattress and Base Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMB3004B Set up, operate and maintain a quilting machine

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up operate and maintain a quilting machine which uses automated processes to apply padding/foam to plain or patterned fabric.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan work operations	1.1. Work instructions are used to determine job requirements, including quality, materials, equipment and quantities 1.2. Workplace health and safety requirements, including personal protection needs, are observed through the work 1.3. Material for processing is selected and inspected for quality 1.4. Machine, the thread guides and needles are identified and checked for safe and effective operation 1.5. Procedures are determined for minimising waste material 1.6. Procedures are identified for maximising energy efficiency while completing the job
2. Set up machines	2.1. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions 2.2. Trial runs are conducted to check machine operation, accuracy and quality of finished work 2.3. Necessary adjustments are made to machine settings
3. Complete the quilting process	3.1. Machine start-up procedure is carried out in accordance with manufacturer instructions 3.2. Materials are fed into machine in accordance with manufacturer instructions, tooling requirements, safe handling procedures and standard workplace operating procedures 3.3. Machine is operated in accordance with its designed capacity and purpose, and to manufacturer recommendations 3.4. Machine operation, including inputs and outcomes, is monitored to ensure product quality and output 3.5. Waste quantities are checked and minimised 3.6. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedure 3.7. Problems with the required work or the operation of the machine are identified and reported to appropriate persons
4. Clean up work area and maintain	4.1. Material that can be reused is collected and stored 4.2. Waste and scrap is removed following workplace

ELEMENT	PERFORMANCE CRITERIA
equipment	<p>procedures</p> <p>4.3. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures</p> <p>4.4. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures</p> <p>4.5. Operator maintenance is completed in accordance with manufacturer specifications and site procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to hand and power tools, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate set up, operating and maintenance problems, avoid re-working and wastage
- use workplace technology related to semi-automated or automated quilting machines, including tooling, equipment and accuracy devices

Required knowledge

- the types, characteristics, uses and limitations of the machines
- characteristics, uses and limitations of thread, fabric, padding and foam
- workplace guidelines regarding acceptable tolerance levels
- workplace safety policies and procedures
- procedures for reporting machinery faults and material defects

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Read and interpret cutting lists and job specifications to prepare for work
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Identify, set up and operate a semi-automated or automated quilting machine to complete the following:
 - setting up and applying at least two different fabrics and padding/foam
 - identifying and correcting at least two real or simulated machining faults
 - one cam change
- Conduct operator maintenance on the machines and equipment
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource implications

Access to a semi-automated or automated quilting machine, including tooling equipment and accuracy devices.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other

EVIDENCE GUIDE	
	units of competency.
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	Work involves applying and processing foam/padding to the underside of plain or patterned fabric using a quilting design
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, building codes, material safety management systems, hazardous substances, dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate judgement and problem solving skills in the set up and operation of machines • Work will be performed in workplaces which are involved in the manufacture or restoration of mattresses and bases
Quilting machines	<ul style="list-style-type: none"> • Automated quilting machines use semi-automated or automated processes to apply sewn patterns on fabric, foam and padding • Machines are to include either semi-automated or fully automated quilting machines
Material to be processed may include but is not limited to:	<ul style="list-style-type: none"> • plain or patterned fabrics • padding materials and foam
Operator maintenance includes:	<ul style="list-style-type: none"> • the cleaning and refurbishing of the quilting needle unit, thread guides, shuttles and loopers
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operations of tools

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Mattress and Base Making
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMI3001A Assemble instrument components

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the work involved in the assembly of timber components of musical instruments.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The assembly of instrument components applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for component assembly	1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to machine material are verified and complied with 1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i> 1.3. OHS policies and procedures relevant to the assembly of components are to be followed throughout the application of this competency 1.4. Work instructions are used to determine job requirements including design, tolerances, process, materials, finish and quality 1.5. Assembly sequence is planned 1.6. Procedures are determined for checking quality at each stage of the process
2. Prepare for component assembly	2.1. Fixing and joining devices are selected in line with work instructions and type of materials to be joined 2.2. Suitable work area is selected for the task 2.3. Components, hardware, fittings and attachments are collected 2.4. Tools and equipment suitable to the fixing method are selected and checked for safe operation 2.5. Required (if any) jigs are selected and checked for suitability for purpose
3. Assemble components	3.1. Components are laid out and joined using: jigs (if required), appropriate fastenings 3.2. Hand and/or power tools and equipment are used as required 3.3. Assembled instrument is checked for alignment and squareness, correct number and fittings of fasteners, hardware, fitting and attachments, conformity to work instruction and quality requirements 3.4. Components which do not meet quality specifications are repaired or tagged for further processing or recycling/disposal 3.5. Finished instruments are organised and stored in holding area ensuring there is no obstruction to traffic, products are not damaged in storage, incompatible items are not stored together, products are arranged to match the sequence of work
4. Finalise component	4.1. Faulty and/or defective equipment is tagged and

ELEMENT	PERFORMANCE CRITERIA
assembly	reported in accordance with workplace procedures 4.2. Waste and scrap is removed following workplace procedures 4.3. Tools and equipment used is cleaned, inspected for serviceable condition and stored appropriately in accordance with workplace procedures 4.4. Equipment and work area clean-up is maintained in accordance with workplace procedures and professional standards

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand timber technology and information related to musical instrument products
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to instrument assembly
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in timber and/or assembly components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of assembly techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of components including calculators, measuring devices and assembly systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• characteristics of timber, timber products and defects• computer programs• cutting patterns and sequences• cutting tool condition assessment• industry standard cross-sections and lengths• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
 - safely perform component assembly functions
 - plan the assembly of components
 - prepare for the assembly of components
 - assemble components
 - finalise assembly of components

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the assembly of musical instrument components
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

EVIDENCE GUIDE

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Work order

- is used to determine job requirements including design, tolerances, process, materials, finish and quantity

Appropriate personnel

- may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> may include but are not limited to measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, air compressor and hoses, clamps. screwdrivers, pincers
Workplace environment	<ul style="list-style-type: none"> may be a small, medium or large workplace may be involved in the manufacture or repair of violins, violas, cellos, mandolins, banjos, dulcimers, guitars and other musical instruments
Materials	<ul style="list-style-type: none"> may include but are not limited to timber, veneers, manufactured board, glues, screws, nails, dowels
Information and procedures may include:	<ul style="list-style-type: none"> workplace procedures relating to the use and operation of tools and equipment workplace instructions, including job sheets, plans, drawing and designs workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFMI3002A Construct and apply decorative treatments and finishes to musical instruments

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the work involved in cutting and applying veneers, laminates, inlays and other decorative treatments to musical instruments.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The construction and application of decorative treatments and finishes to musical instruments applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the person's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for work	<p>1.1. Applicable <i>OH&S</i>, <i>legislative</i> and <i>organisational</i> requirements relevant to machine material are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Occupational health and safety regulations, policies and procedures relevant to the construction and application of decorative treatments and finishes to musical instruments are to be followed throughout the application of this competency</p> <p>1.4. Work instructions are used to determine job requirements including: design, tolerances, process, materials, finish and quality</p> <p>1.5. Assembly sequence is planned</p> <p>1.6. Procedures are determined for checking quality at each stage of the process</p>
2. Prepare for work	<p>2.1. Equipment, tools and processes are identified and checked for safe and effective operation</p> <p>2.2. Suitable work area is selected for the task</p> <p>2.3. Materials are selected and checked for flaws following work instructions</p> <p>2.4. Design of item/s is laid out</p> <p>2.5. Suitable joining points are selected</p> <p>2.6. Material is prepared for cutting</p> <p>2.7. Hazards connected with the work are identified and precautions taken</p> <p>2.8. Required hand and/or power tools, equipment and materials are collected in the work area</p> <p>2.9. Machines and equipment are checked for availability</p>
3. Cut and fit items	<p>3.1. Material is cut to size and required thickness</p> <p>3.2. Materials are laid out in the required design</p> <p>3.3. Design of item/s is cut to requirements</p> <p>3.4. Joining process is undertaken according to workplace procedures or industry practice</p> <p>3.5. Adhesives are applied according to workplace procedures and/or manufacturers' instructions</p> <p>3.6. Work is fitted according to workplace instructions</p> <p>3.7. Dyes or stains for colouring (if required) are applied</p> <p>3.8. Work is checked against required quality standards</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.9. Any non-conformity with the required quality standards is rectified</p> <p>3.10. Machinery is used in accordance with workplace procedures including use of personal protective equipment</p>
4. Finalise operation	<p>4.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures</p> <p>4.2. Finishing of surfaces is completed by hand/machine to meet workplace requirements</p> <p>4.3. Item is inspected and any imperfections are rectified following workplace procedures</p> <p>4.4. Completed work is checked against required quality standard</p> <p>4.5. Work area is cleaned, hand and/or power tools, equipment is cleaned, maintained and stored in accordance with workplace procedures</p> <p>4.6. Machinery is cleaned and left in a safe mode</p> <p>4.7. Off-cuts and unusual materials are collected and stored for re-use or disposal following workplace procedures</p> <p>4.8. Waste and scrap materials are dealt with following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- using appropriate communication and interpersonal techniques with colleagues and others
- participating in a team environment to complete tasks
- identifying problems and equipment faults and demonstrate appropriate response procedures
- initiating new ideas or work methodologies
- accurately planning and organising work activities
- efficiently managing self responsibilities and timelines for completion of work
- using and maintain relevant tools, machinery and equipment
- complying with legislation, regulations, standards, codes of practice and established safe practices and procedures for machining material
- accurately recording and maintaining information relating to machining material
- efficiently and safely machining material

Required knowledge

- State or Territory OH&S legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of timber, timber products and defects
- set up and operation of equipment
- computer programs
- cutting patterns and sequences
- cutting tool condition assessment
- industry standard cross-sections and lengths
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
 - safely perform construction and application of treatments and finishes
 - plan construction and application
 - prepare for construction and application
 - complete construction and application
 - finalise construction and application

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the construction and application of decorative treatments and finishes to musical instruments
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
 Assessment methods must confirm consistency and accuracy of performance (over time and in a range of

EVIDENCE GUIDE

workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OH&S requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OH&S, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OH&S, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Work order	<ul style="list-style-type: none"> is used to determine job requirements including design, tolerances, process, materials, finish and quantity
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include, but are not limited to measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, air compressor and hoses, clamps. screwdrivers, pincers
Workplace environment	<ul style="list-style-type: none"> • may be a small, medium or large workplace • may be involved in the manufacture or repair of violins, violas, cellos, mandolins, banjos, dulcimers, guitars and other musical instruments
Materials	<ul style="list-style-type: none"> • may include, but is not limited to timber, veneers, manufactured board, glues, screws, nails, dowels
Information and procedures may include:	<ul style="list-style-type: none"> • Manufacturer's specifications and operational procedures • Workplace procedures relating to constructing and applying decorative treatments and finishes • Workplace instructions, including job sheets, plans, drawing and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMI3003A Manufacture acoustic guitars

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the work involved in the manufacturing of acoustic guitars.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The manufacture of acoustic guitars applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson/ level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for manufacturing	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to machine material are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Occupational health and safety regulations, policies and procedures relevant to the manufacture of acoustic guitars are to be followed throughout the application of this competency.</p> <p>1.4. Customer requirements are received, analysed and confirmed in accordance with enterprise procedures.</p> <p>1.5. Specifications are drawn up and required materials are identified in accordance with enterprise procedures.</p> <p>1.6. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency.</p>
2. Prepare for manufacturing	<p>2.1. Required materials for the manufacture of the acoustic guitar are acquired, inspected and tested in accordance with enterprise procedures.</p> <p>2.2. Required jigs and templates for the manufacture of the acoustic guitar are identified and acquired in accordance with enterprise procedures.</p> <p>2.3. Tools, test and measurement instruments, consumables and other equipment required for the manufacture of the acoustic guitar are identified, selected and obtained in accordance with enterprise procedures.</p>
3. Manufacture instruments	<p>3.1. Tools, jigs and templates are applied in the manufacturing process in accordance with professional standards and enterprise requirements.</p> <p>3.2. Materials are cut, formed, aligned and joined in accordance with professional standards and enterprise requirements.</p> <p>3.3. Advice and assistance is sought from others as required.</p> <p>3.4. Ongoing checks of the quality of the manufacturing process are undertaken in accordance with professional standards and practices and quality procedures.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.5. Tests and observations are interpreted to confirm the acoustic guitar is compliant with the specifications and professional standards.
4. Finish surfaces	<p>4.1. Surface finish materials are prepared for application in accordance with manufacturer specifications and enterprise requirements.</p> <p>4.2. Acoustic guitar surface is prepared for finishing in accordance with customer specifications and enterprise requirements.</p> <p>4.3. Acoustic guitar surface is finished and refinished in accordance with customer specifications and enterprise requirements.</p> <p>4.4. Ongoing checks of the quality of the finishing process are undertaken in accordance with professional standards and practices and quality procedures.</p>
5. Finalise manufacturing processes	<p>5.1. Final checks and tests of the quality of the acoustic guitar are undertaken in accordance with customer's specifications, professional standards and practices and quality procedures.</p> <p>5.2. Production and other records are completed in accordance with enterprise requirements and standards.</p> <p>5.3. Housekeeping is conducted in accordance with enterprise requirements and professional standards.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand timber technology and information related to acoustic guitars
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to the manufacture of acoustic guitars
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in timber and/or guitar components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of manufacturing techniques
- seek learning opportunities
- use the workplace technology related to the selection and manufacture of components including computers, measuring devices and assembly systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- characteristics, capabilities and limitations of the timbers traditionally used in the manufacture of acoustic guitars
- characteristics of timber, timber products and defects
- properties of staining and finishing materials
- cutting patterns and sequences
- cutting tool condition assessment
- industry standard cross-sections and lengths
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
 - safely perform manufacturing functions
 - plan the manufacture of an acoustic guitar
 - prepare for the manufacture of an acoustic guitar
 - manufacture of acoustic guitar
 - apply the quality and professional standards required when manufacturing an acoustic guitar
 - surface finish an acoustic guitar
 - finalise the manufacturing process.

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the manufacture of acoustic guitars
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
Assessment methods must confirm consistency and

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Work order

- is used to determine job requirements including design, tolerances, process, materials, finish and quantity

Appropriate personnel

- may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include but are not limited to measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, air compressor and hoses, clamps screwdrivers, pincers • may include special tools such as side moulds, blocks, cramps, cradles, contour and step gauges, arching and thickness plane.
Workplace environment	<ul style="list-style-type: none"> • may be a small, medium or large workplace • may be involved in the manufacture or repair of violins, violas, cellos, mandolins, banjos, dulcimers, guitars and other musical instruments
Materials	<ul style="list-style-type: none"> • may include but are not limited to timber, veneers, manufactured board, glues, screws, nails, dowels • may include various timbers that are traditionally used in these instruments • may include surface finish materials such as lacquers, shellac, wax, oil, stripper, spirit stains, water stains
Information and procedures may include:	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment. • Workplace instructions, including job sheets, plans, drawing and designs. • Workplace procedures relating to reporting and communication.

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMI3004A Manufacture brass instruments

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the work involved in the manufacturing of brass instruments, including cornets, trumpets and other military brass instruments.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The manufacture of brass instruments applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson/ level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for manufacturing	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to the manufacture of brass instruments are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Customer requirements are received, analysed and confirmed in accordance with enterprise procedures</p> <p>1.4. Specifications are drawn up and required materials are identified in accordance with enterprise procedures</p> <p>1.5. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Prepare for manufacturing	<p>2.1. Required materials for the manufacture of the brass instrument are acquired, inspected and tested in accordance with enterprise procedures</p> <p>2.2. Required electroplating and soldering materials for the manufacture of the brass instrument are identified and acquired in accordance with enterprise procedures</p> <p>2.3. Tools, test and measurement instruments, consumables and other equipment required for the manufacture of the brass instrument are identified, selected and obtained in accordance with enterprise procedures</p>
3. Manufacture instruments	<p>3.1. Tools and equipment are applied in the manufacturing process in accordance with professional standards and enterprise requirements</p> <p>3.2. Materials are cut, formed, bent, aligned and soldered in accordance with professional standards and enterprise requirements</p> <p>3.3. Advice and assistance is sought from others as required</p> <p>3.4. Ongoing checks of the quality of the manufacturing process are undertaken in accordance with professional standards and practices and quality procedures.</p> <p>3.5. Tests and observations are interpreted to confirm the brass instrument is compliant with the specifications and professional standards</p>

ELEMENT	PERFORMANCE CRITERIA
4. Finish surfaces	<p>4.1. Surface finish materials are prepared for application in accordance with manufacturer specifications and enterprise requirements</p> <p>4.2. Brass instrument surface is prepared for finishing in accordance with customer specifications and enterprise requirements</p> <p>4.3. Brass instrument surface is electroplated in accordance with customer specifications and enterprise requirements</p> <p>4.4. Ongoing checks of the quality of the finishing process are undertaken in accordance with professional standards and practices and quality procedures</p>
5. Finalise manufacturing processes	<p>5.1. Final checks and tests of the quality of the brass instrument are undertaken in accordance with customer's specifications, professional standards and practices and quality procedures</p> <p>5.2. Production and other records are completed in accordance with enterprise requirements and standards</p> <p>5.3. Housekeeping is conducted in accordance with enterprise requirements and professional standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand brass instrument technology and information related to brass instrument products
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to instrument manufacture
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in metals and/or assembly components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of manufacturing techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of components including computers, measuring devices and manufacturing systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- characteristics, capabilities and limitations of the metals traditionally used in the manufacture of brass instruments
- characteristics, capabilities and limitations of the brass instruments being manufactured
- properties of electroplating and soldering materials
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
 - safely perform manufacturing functions
 - plan the manufacture of a brass instrument
 - prepare for the manufacture of a brass instrument
 - manufacture a brass instrument
 - apply the quality and professional standards required when manufacturing a brass instrument
 - surface finish a brass instrument
 - finalise the manufacturing process

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the manufacture of brass instruments
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
Assessment methods must confirm consistency and

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Work order	<ul style="list-style-type: none"> is used to determine job requirements including design, tolerances, process, materials, finish and quantity
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include, but are not limited to measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, air compressor and hoses, clamps screwdrivers, pincers,
Workplace environment	<ul style="list-style-type: none"> • may be a small, medium or large workplace • may be involved in the manufacture or repair of brass instruments
Materials	<ul style="list-style-type: none"> • may include various metals that are traditionally used in these instruments • may include electroplating and soldering materials required for different metals that comprise the components of brass instruments, including bell, valve, body, slides (trombone), mouthpiece, tuning slides, mutes, conical tubing
Information and procedures may include:	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawing and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMI3005A Manufacture electric guitars

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the work involved in the manufacturing of electric guitars.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The manufacturing of electric guitars applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson/ level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for manufacturing	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to the manufacture of electric guitars are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Customer requirements are received, analysed and confirmed in accordance with enterprise procedures</p> <p>1.4. Specifications are drawn up and required materials are identified in accordance with enterprise procedures</p> <p>1.5. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Prepare for manufacturing	<p>2.1. Required materials for the manufacture of the electric guitar are acquired, inspected and tested in accordance with enterprise procedures</p> <p>2.2. Required jigs and templates for the manufacture of the electric guitar are identified and acquired in accordance with enterprise procedures</p> <p>2.3. Tools, test and measurement instruments, consumables and other equipment required for the manufacture of the electric guitar are identified, selected and obtained in accordance with enterprise procedures</p>
3. Manufacture instruments	<p>3.1. Tools, jigs and templates are applied in the manufacturing process in accordance with professional standards and enterprise requirements</p> <p>3.2. Materials are cut, formed, aligned and joined in accordance with professional standards and enterprise requirements</p> <p>3.3. Electronics are located, connected and wired up in accordance with professional standards and enterprise requirements</p> <p>3.4. Advice and assistance is sought from others as required</p> <p>3.5. Ongoing checks of the quality of the manufacturing process are undertaken in accordance with professional standards and practices and quality procedures</p> <p>3.6. Tests and observations are interpreted to confirm the</p>

ELEMENT	PERFORMANCE CRITERIA
	electric guitar is compliant with the specifications and professional standards
4. Finish surfaces	<p>4.1. Surface finish materials are prepared for application in accordance with manufacturers' specifications and enterprise requirements</p> <p>4.2. Electric guitar surface is prepared for finishing in accordance with customer's specifications and enterprise requirements</p> <p>4.3. Electric guitar surface is finished and refinished in accordance with customer's specifications and enterprise requirements</p> <p>4.4. Ongoing checks of the quality of the finishing process are undertaken in accordance with professional standards and practices and quality procedures</p>
5. Finalise manufacturing processes	<p>5.1. Final checks and tests of the quality of the electric guitar are undertaken in accordance with customer's specifications, professional standards and practices and quality procedures</p> <p>5.2. Production and other records are completed in accordance with enterprise requirements and standards</p> <p>5.3. Housekeeping is conducted in accordance with enterprise requirements and professional standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand technology and information related to musical instrument manufacturing
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to instrument manufacture
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in materials and/or guitar components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of manufacturing techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of components including computers, measuring devices and assembly systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- characteristics, capabilities and limitations of the materials traditionally used in the manufacture of electric guitars
- selecting and fitting the electronic components of an electric guitar
- characteristics, capabilities and limitations of the electric guitars being manufactured
- properties of finishing materials
- cutting tool condition assessment
- industry standard cross-sections and lengths
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
 - safely perform manufacturing functions
 - plan the manufacture of an electric guitar
 - prepare for the manufacture of an electric guitar
 - manufacture an electric guitar
 - select and fit the electric components of an electric guitar
 - apply the quality and professional standards required when manufacturing an electric guitar
 - surface finish an electric guitar
 - finalise the manufacturing process

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the manufacture of electric guitars
 - specifications and work instructions

EVIDENCE GUIDE**Method of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Work order

- is used to determine job requirements including design, tolerances, process, materials, finish and quantity

Appropriate personnel

- may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include but are not limited to measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, air compressor and hoses, clamps screwdrivers, pincers • may include special tools such as side moulds, blocks, cramps, cradles, contour and step gauges, arching and thickness plane.
Workplace environment	<ul style="list-style-type: none"> • may be a small, medium or large workplace • may be involved in the manufacture or repair of violins, violas, cellos, mandolins, banjos, dulcimers, guitars and other musical instruments
Materials	<ul style="list-style-type: none"> • may include various timbers metals and other materials that are traditionally used in these instruments • may include surface finish materials such as lacquers, fillers, sealers, shellac, wax, oil stripper, spirit stains, water stains • may include electronic components such as pick ups, pick up selector, vibrato, volume and tone potentiometers, jack socket
Information and procedures may include:	<ul style="list-style-type: none"> • workplace procedures relating to the use and operation of tools and equipment • workplace instructions, including job sheets, plans, drawing and designs • workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMI3006A Manufacture percussion instruments

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the work involved in the manufacturing of percussion instruments.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The manufacture of percussion instruments applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson/ level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for manufacturing	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to the manufacture of percussion instruments are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Customer requirements are received, analysed and confirmed in accordance with enterprise procedures</p> <p>1.4. Specifications are drawn up and required materials are identified in accordance with enterprise procedures</p> <p>1.5. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Prepare for manufacturing	<p>2.1. Required materials for the manufacture of the percussion instrument are acquired, inspected and tested in accordance with enterprise procedures</p> <p>2.2. Required jigs and templates for the manufacture of the percussion instrument are identified and acquired in accordance with enterprise procedures</p> <p>2.3. Tools, test and measurement instruments, consumables and other equipment required for the manufacture of the percussion instrument are identified, selected and obtained in accordance with enterprise procedures</p>
3. Manufacture instruments	<p>3.1. Tools and equipment are applied in the manufacturing process in accordance with professional standards and enterprise requirements</p> <p>3.2. Materials are cut, bent, aligned and soldered in accordance with professional standards and enterprise requirements</p> <p>3.3. Advice and assistance is sought from others as required</p> <p>3.4. On going checks of the quality of the manufacturing process are undertaken in accordance with professional standards and practise and quality procedures</p> <p>3.5. Tests and observations are interpreted to confirm the percussion instrument is compliant with the specifications and professional standards</p>

ELEMENT	PERFORMANCE CRITERIA
4. Finish surfaces	<p>4.1. Surface finish materials are prepared for application in accordance with manufacturers' specifications and enterprise requirements</p> <p>4.2. Percussion instrument surface is prepared for finishing in accordance with customer's specifications and enterprise requirements</p> <p>4.3. Percussion instrument surface is electroplated and painted in accordance with customer's specifications and enterprise requirements</p> <p>4.4. Ongoing checks of the quality of the finishing process are undertaken in accordance with professional standards and practices and quality procedures</p>
5. Finalise manufacturing processes	<p>5.1. Final checks and tests of the quality of the percussion instrument are undertaken in accordance with customer's specifications, professional standards and practices and quality procedures</p> <p>5.2. Production and other records are completed in accordance with enterprise requirements and standards</p> <p>5.3. Housekeeping is conducted in accordance with enterprise requirements and professional standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand technology and information related to percussion instrument products
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to percussion instrument manufacturing
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in materials and/or instrument components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of manufacturing techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of materials and components including computers, measuring devices and assembly systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- characteristics, capabilities and limitations of the materials traditionally used in the manufacture of percussion instruments
- characteristics, capabilities and limitations of the percussion instruments being manufactured
- properties of electroplating, painting and soldering materials
- identify and select the appropriate materials traditionally used in the manufacture of percussion instruments
- cutting patterns and sequences
- cutting tool condition assessment
- industry standard cross-sections and lengths
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
 - safely perform manufacturing functions
 - plan the manufacture of a percussion instrument
 - prepare for the manufacture of a percussion instrument
 - manufacture of a percussion instrument
 - apply the quality and professional standards required when manufacturing a percussion instrument
 - apply the final finish to a percussion instrument
 - finalise the manufacturing process

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the manufacture of percussion instruments
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment

EVIDENCE GUIDE

guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Work order	<ul style="list-style-type: none"> is used to determine job requirements including design, tolerances, process, materials, finish and quantity
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include but are not limited to measuring tapes or rules, hammers, soldering irons, squares, bevels, chisels, planes, hand saws, power saws, power drills/ screwdrivers, air compressor and hoses, clamps screwdrivers, pincers,
Workplace environment	<ul style="list-style-type: none"> • may be a small, medium or large workplace • may be involved in the manufacture or repair of percussion and other musical instruments
Materials	<ul style="list-style-type: none"> • may include various metals, plastics, skins and timbers that are traditionally used in these instruments • may include those electroplating and soldering materials required for different metals that comprise the components of percussion instruments, including tension rings, drumhead, body, screws, stands
Information and procedures may include:	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawing and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMI3007A Manufacture special stringed instruments

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the work involved in the manufacturing of special stringed instruments, specifically banjos, mandolins and dulcimers.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The manufacture of special stringed instruments applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson/ level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for manufacturing	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to the manufacture of special stringed instruments are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Customer requirements are received, analysed and confirmed in accordance with enterprise procedures</p> <p>1.4. Specifications are drawn up and required materials are identified in accordance with enterprise procedures</p> <p>1.5. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Prepare for manufacturing	<p>2.1. Required materials for the manufacture of the special stringed instrument are acquired, inspected and tested in accordance with enterprise procedures</p> <p>2.2. Required jigs and templates for the manufacture of the special stringed instrument are identified and acquired in accordance with enterprise procedures</p> <p>2.3. Tools, test and measurement instruments, consumables and other equipment required for the manufacture of the special stringed instrument are identified, selected and obtained in accordance with enterprise procedures</p>
3. Manufacture instruments	<p>3.1. Tools and equipment are applied in the manufacturing process in accordance with professional standards and enterprise requirements</p> <p>3.2. Materials are cut, formed, aligned and joined in accordance with professional standards and enterprise requirements</p> <p>3.3. Advice and assistance is sought from others as required</p> <p>3.4. On going checks of the quality of the manufacturing process are undertaken in accordance with professional standards and practise and quality procedures</p> <p>3.5. Tests and observations are interpreted to confirm the special stringed instrument is compliant with the specifications and professional standards</p>
4. Finish surfaces	4.1. Surface finish materials are prepared for application

ELEMENT	PERFORMANCE CRITERIA
	<p>in accordance with manufacturer specifications and enterprise requirements</p> <p>4.2. Special stringed instrument surface is prepared for finishing in accordance with customer specifications and enterprise requirements</p> <p>4.3. Special stringed instrument surface is finished and refinished in accordance with customer specifications and enterprise requirements</p> <p>4.4. Ongoing checks of the quality of the finishing process are undertaken in accordance with professional standards and practices and quality procedures</p>
5. Finalise manufacturing processes	<p>5.1. Final checks and tests of the quality of the special stringed instruments are undertaken in accordance with customer's specifications, professional standards and practices and quality procedures</p> <p>5.2. Production and other records are completed in accordance with enterprise requirements and standards</p> <p>5.3. Housekeeping is conducted in accordance with enterprise requirements and professional standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand timber technology and information related to special stringed instrument products
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to instrument manufacture
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in timber and/or instrument components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of assembly techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of components including computers, measuring devices and assembly systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- characteristics, capabilities and limitations of the timbers traditionally used in the manufacture of special stringed instruments
- characteristics of timber, timber products and defects
- properties of staining and finishing materials
- cutting patterns and sequences
- cutting tool condition assessment
- industry standard cross-sections and lengths
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
 - safely perform manufacturing functions
 - plan the manufacture of a special stringed instrument
 - prepare for the manufacture of a special stringed instrument
 - manufacture of a special stringed instrument
 - apply the quality and professional standards required when manufacturing a special stringed instrument
 - apply the final finish to a special stringed instrument
 - finalise the manufacturing process

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the manufacture of special stringed instruments
 - specifications and work instructions

EVIDENCE GUIDE**Method of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Work order

- is used to determine job requirements including design, tolerances, process, materials, finish and quantity

Appropriate personnel

- may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include but are not limited to measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, air compressor and hoses, clamps screwdrivers, pincers • and may include special tools such as side moulds, blocks, cramps, cradles, contour and step gauges, arching and thickness plane.
Workplace environment	<ul style="list-style-type: none"> • may be a small, medium or large workplace • may be involved in the manufacture or repair of violins, violas, cellos, mandolins, banjos, dulcimers, guitars and other musical instruments
Materials	<ul style="list-style-type: none"> • may include but are not limited to timber, veneers, manufactured board, glues, screws, nails, dowels • may include various timbers that are traditionally used in these instruments • may include surface finish materials such as lacquers, shellac, wax, oil, stripper, spirit stains, water stains
Information and procedures may include:	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawing and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMI3008A Manufacture stringed instruments

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the work involved in the manufacturing of stringed instruments, specifically violins, violas and cellos.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The manufacture of stringed instruments applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson/ level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for manufacturing	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to the manufacture of stringed instruments are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Customer requirements are received, analysed and confirmed in accordance with enterprise procedures</p> <p>1.4. Specifications are drawn up and required materials are identified in accordance with enterprise procedures</p> <p>1.5. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Prepare for manufacturing	<p>2.1. Required materials for the manufacture of the stringed instrument are acquired, inspected and tested in accordance with enterprise procedures</p> <p>2.2. Required jigs and templates for the manufacture of the stringed instrument are identified and acquired in accordance with enterprise procedures</p> <p>2.3. Tools, test and measurement instruments, consumables and other equipment required for the manufacture of the stringed instrument are identified, selected and obtained in accordance with enterprise procedures</p>
3. Manufacture instruments	<p>3.1. Tools and equipment are applied in the manufacturing process in accordance with professional standards and enterprise requirements</p> <p>3.2. Materials are cut, formed, aligned and joined in accordance with professional standards and enterprise requirements</p> <p>3.3. Advice and assistance is sought from others as required</p> <p>3.4. On going checks of the quality of the manufacturing process are undertaken in accordance with professional standards and practise and quality procedures</p> <p>3.5. Tests and observations are interpreted to confirm the stringed instrument is compliant with the specifications and professional standards</p>
4. Finish surfaces	<p>4.1. Surface finish materials are prepared for application</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>in accordance with manufacturer specifications and enterprise requirements</p> <p>4.2. Stringed instrument surface is prepared for finishing in accordance with customer specifications and enterprise requirements</p> <p>4.3. Stringed instrument surface is finished and refinished in accordance with customer specifications and enterprise requirements</p> <p>4.4. Ongoing checks of the quality of the finishing process are undertaken in accordance with professional standards and practices and quality procedures</p>
5. Finalise manufacturing processes	<p>5.1. Final checks and tests of the quality of the special stringed instruments are undertaken in accordance with customer specifications, professional standards and practices and quality procedures</p> <p>5.2. Production and other records are completed in accordance with enterprise requirements and standards</p> <p>5.3. Housekeeping is conducted in accordance with enterprise requirements and professional standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand technology and information related to percussion instrument products
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to percussion instrument manufacturing
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in materials and/or instrument components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of manufacturing techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of materials and components including computers, measuring devices and assembly systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- characteristics, capabilities and limitations of the materials traditionally used in the manufacture of percussion instruments
- characteristics, capabilities and limitations of the percussion instruments being manufactured
- properties of electroplating, painting and soldering materials
- identify and select the appropriate materials traditionally used in the manufacture of percussion instruments
- cutting patterns and sequences
- cutting tool condition assessment
- industry standard cross-sections and lengths
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
 - safely perform manufacturing functions
 - plan the manufacture of a stringed instrument
 - prepare for the manufacture of a stringed instrument
 - manufacture of a stringed instrument
 - apply the quality and professional standards required when manufacturing a stringed instrument
 - apply the final finish to a stringed instrument
 - finalise the manufacturing process

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the manufacture of stringed instruments
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment

EVIDENCE GUIDE

guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Work order

- is used to determine job requirements including design, tolerances, process, materials, finish and quantity

Appropriate personnel

- may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include but are not limited to measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, air compressor and hoses, clamps screwdrivers, pincers • may include special tools such as side moulds, blocks, cramps, cradles, contour and step gauges, arching and thickness plane, brass bar clamp.
Workplace environment	<ul style="list-style-type: none"> • may be a small, medium or large workplace • may be involved in the manufacture or repair of violins, violas, cellos, mandolins, banjos, dulcimers, guitars and other musical instruments
Materials	<ul style="list-style-type: none"> • may include but are not limited to timber, veneers, manufactured board, glues, screws, nails, dowels • may include various timbers that are traditionally used in these instruments • may include surface finish materials such as lacquers, shellac, wax, oil, stripper, spirit stains, water stains
Information and procedures may include:	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawing and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMI3009A Repair brass instruments

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the work involved in the repair of brass instruments, including cornets, trumpets and other military brass instruments.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The repair of brass instruments applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson/ level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for repair	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to the repair of brass instruments are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Customer requirements are received, analysed and confirmed in accordance with enterprise procedures</p> <p>1.4. Specifications are drawn up and required materials are identified in accordance with enterprise procedures</p> <p>1.5. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Prepare for repair	<p>2.1. Brass instrument is cleaned and examined and required repairs are determined in accordance with customer's and enterprise requirements</p> <p>2.2. Required materials for the repair of the brass instrument are acquired inspected and tested in accordance with enterprise procedures</p> <p>2.3. Required electroplating and soldering materials for the repair of the brass instrument are identified and acquired in accordance with enterprise procedures</p> <p>2.4. Tools, test and measurement instruments, consumables and other equipment required for the repair of the brass instrument are identified, selected and obtained in accordance with enterprise procedures</p>
3. Manufacture instruments	<p>3.1. Tools and equipment are applied in the repair process in accordance with professional standards and enterprise requirements</p> <p>3.2. Materials are cut, formed, bent, aligned and soldered in accordance with professional standards and enterprise requirements</p> <p>3.3. Advice and assistance is sought from others as required</p> <p>3.4. On going checks of the quality of the manufacturing process are undertaken in accordance with professional standards and practices and quality procedures</p> <p>3.5. Tests and observations are interpreted to confirm the</p>

ELEMENT	PERFORMANCE CRITERIA
	brass instrument is compliant with the specifications and professional standards
4. Finish surfaces	<p>4.1. Surface finish materials are prepared for application in accordance with repair specifications and enterprise requirements</p> <p>4.2. Repaired brass instrument surface is prepared for finishing in accordance with customer's specifications and enterprise requirements</p> <p>4.3. Repaired brass instrument surface is electroplated in accordance with customer's specifications and enterprise requirements</p> <p>4.4. On going checks of the quality of the finishing process are undertaken in accordance with professional standards and practices and quality procedures</p>
5. Finalise manufacturing processes	<p>5.1. Final checks and tests of the quality of the brass instrument are undertaken in accordance with customer's specifications, professional standards and practices and quality procedures</p> <p>5.2. Repair and other records are completed in accordance with enterprise requirements and standards</p> <p>5.3. Housekeeping is conducted in accordance with enterprise requirements and professional standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- Required skills
- collect, organise and understand technology and information related to brass instrument products
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to instrument repair
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in materials and/or repair components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of repair techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of repair components including computers, measuring devices and repair systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

maintenance

- characteristics, capabilities and limitations of the metals traditionally used in the manufacture of brass instruments
- characteristics, capabilities and limitations of the brass instruments being repaired
- properties of electroplating and soldering materials
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
 - safely perform repair functions
 - plan the repair of a brass instrument
 - prepare for the repair of a brass instrument
 - repair a brass instrument
 - apply the quality and professional standards required when repairing a brass instrument
 - electroplate and solder repaired components of a brass instrument
 - finalise the repair process

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the repair of brass instruments
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

EVIDENCE GUIDE

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Work order

- is used to determine job requirements including design, tolerances, process, materials, finish and quantity

Appropriate personnel

- may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include but are not limited to measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, air compressor and hoses, clamps screwdrivers, pincers,
Workplace environment	<ul style="list-style-type: none"> • may be a small, medium or large workplace • may be involved in the manufacture or repair of brass instruments
Materials	<ul style="list-style-type: none"> • may include various metals that are traditionally used in these instruments • may include electroplating and soldering materials required for different metals that comprise the components of brass instruments, including bell, valve, body, slides (trombone), mouthpiece, tuning slides, mutes, conical tubing
Information and procedures may include:	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment. • Workplace instructions, including job sheets, plans, drawing and designs. • Workplace procedures relating to reporting and communication.

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMI3010A Repair percussion instruments

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the work involved in the repair of percussion instruments.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The repair of percussion instruments applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson/ level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for repair	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to the repair of percussion instruments are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Customer requirements are received, analysed and confirmed in accordance with enterprise procedures</p> <p>1.4. Specifications are drawn up and required materials are identified in accordance with enterprise procedures</p> <p>1.5. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Prepare for repair	<p>2.1. Percussion instrument is cleaned and examined and required repairs are determined in accordance with customer's and enterprise requirements</p> <p>2.2. Required materials for the repair of the percussion instrument are acquired, inspected and tested in accordance with enterprise procedures</p> <p>2.3. Required electroplating and soldering materials for the repair of the percussion instrument are identified and acquired in accordance with enterprise procedures</p> <p>2.4. Tools, test and measurement instruments, consumables and other equipment required for the repair of the percussion instrument are identified, selected and obtained in accordance with enterprise procedures</p>
3. Repair instruments	<p>3.1. Tools and equipment are applied in the repair process in accordance with professional standards and enterprise requirements</p> <p>3.2. Materials are cut, bent, aligned and soldered in accordance with professional standards and enterprise requirements</p> <p>3.3. Advice and assistance is sought from others as required</p> <p>3.4. On going checks of the quality of the repair process are undertaken in accordance with professional standards and practise and quality procedures</p> <p>3.5. Tests and observations are interpreted to confirm the</p>

ELEMENT	PERFORMANCE CRITERIA
	percussion instrument is compliant with the specifications and professional standards
4. Finish surfaces	<p>4.1. Surface finish materials are prepared for electroplating in accordance with manufacturer specifications and enterprise requirements</p> <p>4.2. Repaired percussion instrument surface is prepared for finishing in accordance with customer specifications and enterprise requirements</p> <p>4.3. Repaired percussion instrument surface is electroplated and painted in accordance with customer specifications and enterprise requirements</p> <p>4.4. On going checks of the quality of the finishing process are undertaken in accordance with professional standards and practices and quality procedures</p>
5. Finalise repair processes	<p>5.1. Final checks and tests of the quality of the repairs to the percussion instrument are undertaken in accordance with customer specifications, professional standards and practices and quality procedures</p> <p>5.2. Production and other records are completed in accordance with enterprise requirements and standards</p> <p>5.3. Housekeeping is conducted in accordance with enterprise requirements and professional standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand materials technology and information related to percussion instrument products
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to instrument repair
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in materials and/or repair components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of repair techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of repair components including computers, measuring devices and assembly systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- characteristics, capabilities and limitations of the materials traditionally used in the repair of percussion instruments
- characteristics, capabilities and limitations of the percussion instruments being repaired
- properties of electroplating, painting and soldering materials
- identify and select the appropriate materials traditionally used in the manufacture and repair of percussion instruments
- cutting patterns and sequences
- cutting tool condition assessment
- industry standard cross-sections and lengths
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
 - safely perform repair functions
 - plan the repair of a percussion instrument
 - prepare for the repair of a percussion instrument
 - repair of a percussion instrument
 - apply the quality and professional standards required when repairing a percussion instrument
 - electroplate, paint and solder repaired components of a percussion instrument
 - finalise the repair process

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the repair of percussion instruments
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

EVIDENCE GUIDE

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Work order	<ul style="list-style-type: none"> is used to determine job requirements including design, tolerances, process, materials, finish and quantity
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include but are not limited to measuring tapes or rules, hammers, soldering irons, squares, bevels, chisels, planes, hand saws, power saws, power drills/ screwdrivers, air compressor and hoses, clamps screwdrivers, pincers
Workplace environment	<ul style="list-style-type: none"> • may be a small, medium or large workplace • may be involved in the manufacture or repair of percussion and other musical instruments
Materials	<ul style="list-style-type: none"> • may include various metals, plastics, skins and timbers that are traditionally used in these instruments • may include those electroplating and soldering materials required for different metals that comprise the components of percussion instruments, including tension rings, drumhead, body, screws, stands
Information and procedures may include:	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawing and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMI3011A Repair woodwind instruments

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the work involved in the repair of woodwind instruments.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The repair of woodwind instruments applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson/ level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for repair	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to the repair of woodwind instruments are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Customer requirements are received, analysed and confirmed in accordance with enterprise procedures</p> <p>1.4. Specifications are drawn up and required materials are identified in accordance with enterprise procedures</p> <p>1.5. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Prepare for repair	<p>2.1. Woodwind instrument is cleaned and examined and required repairs are determined in accordance with customer and enterprise requirements</p> <p>2.2. Required materials for the repair of the woodwind instrument are acquired, inspected and tested in accordance with enterprise procedures</p> <p>2.3. Required electroplating and soldering materials for the repair of the woodwind instrument are identified and acquired in accordance with enterprise procedures</p> <p>2.4. Tools, test and measurement instruments, consumables and other equipment required for the repair of the woodwind instrument are identified, selected and obtained in accordance with enterprise procedures</p>
3. Repair instruments	<p>3.1. Tools and equipment are applied in the repair process in accordance with professional standards and enterprise requirements</p> <p>3.2. Materials are cut, bent, aligned and soldered in accordance with professional standards and enterprise requirements</p> <p>3.3. Advice and assistance is sought from others as required</p> <p>3.4. On going checks of the quality of the repair process are undertaken in accordance with professional standards and practise and quality procedures</p> <p>3.5. Tests and observations are interpreted to confirm the</p>

ELEMENT	PERFORMANCE CRITERIA
	woodwind instrument is compliant with the specifications and professional standards
4. Finish surfaces	<p>4.1. Surface finish materials are prepared for electroplating in accordance with manufacturer specifications and enterprise requirements</p> <p>4.2. Repaired woodwind instrument surface is prepared for finishing in accordance with customer specifications and enterprise requirements</p> <p>4.3. Repaired woodwind instrument surface is electroplated and painted in accordance with customer specifications and enterprise requirements</p> <p>4.4. On going checks of the quality of the finishing process are undertaken in accordance with professional standards and practices and quality procedures</p>
5. Finalise repair processes	<p>5.1. Final checks and tests of the quality of the repairs to the woodwind instrument are undertaken in accordance with customer specifications, professional standards and practices and quality procedures</p> <p>5.2. Production and other records are completed in accordance with enterprise requirements and standards</p> <p>5.3. Housekeeping is conducted in accordance with enterprise requirements and professional standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand timber and materials technology and information related to woodwind instrument products
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to instrument repair
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in timber and/or repair components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of repair techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of repair components including computers, measuring devices and assembly systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- characteristics, capabilities and limitations of the timbers and other materials traditionally used in the manufacture and repair of woodwind instruments
- identify and select the appropriate materials traditionally used in the repair of woodwind instruments
- select and prepare the relevant electroplating and painting techniques used in the repair of woodwind instruments
- properties of staining and finishing materials
- cutting patterns and sequences
- cutting tool condition assessment
- industry standard cross-sections and lengths
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence to be considered</p>	<ul style="list-style-type: none"> • Read and interpret a work/job specification • Effectively conduct operator maintenance on tools and equipment • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures • Communicate effectively and work safely with others in the work area • Assessment must confirm appropriate knowledge and skills to: <ul style="list-style-type: none"> • safely perform repair functions • plan the repair of a woodwind instrument • prepare for the repair of a woodwind instrument • repair a woodwind instrument • apply the quality and professional standards required when repairing a woodwind instrument • electroplate, paint and solder repaired components of a woodwind instrument • finalise the repair process
<p>Context of, and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to the repair of woodwind instruments • specifications and work instructions
<p>Method of assessment</p>	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p>

EVIDENCE GUIDE

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Work order

- is used to determine job requirements including design, tolerances, process, materials, finish and quantity

Appropriate personnel

- may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include, but are not limited to measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, air compressor and hoses, clamps screwdrivers, pincers
Workplace environment	<ul style="list-style-type: none"> • may be a small, medium or large workplace • may be involved in the manufacture or repair of violins, violas, cellos, mandolins, banjos, dulcimers, guitars and other musical instruments
Materials	<ul style="list-style-type: none"> • may include various timbers that are traditionally used in these instruments • may include electroplating and soldering materials required for different metals that comprise the components of woodwind instruments • may include surface finish materials such as lacquers, shellac, paint, wax, oil, stripper, spirit stains, water stains
Information and procedures may include:	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawing and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMI4001A Repair acoustic guitars

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the work involved in the repair of acoustic guitars, including antique or heritage instruments.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The repair of acoustic guitars applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson/ level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for repair	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to the repair of acoustic guitars are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Customer requirements are received, analysed and confirmed in accordance with enterprise procedures</p> <p>1.4. Specifications are drawn up and required materials are identified in accordance with enterprise procedures</p> <p>1.5. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Prepare for repair	<p>2.1. Acoustic guitar is cleaned and examined and required repairs are determined in accordance with customer's and enterprise requirements</p> <p>2.2. Required materials for the repair of the acoustic guitar are acquired, inspected and tested in accordance with enterprise procedures</p> <p>2.3. Required jigs and templates for the repair of the acoustic guitar are identified and acquired in accordance with enterprise procedures</p> <p>2.4. Tools, test and measurement instruments, consumables and other equipment required for the repair of the acoustic guitar are identified, selected and obtained in accordance with enterprise procedures</p>
3. Repair instruments	<p>3.1. Tools, jigs and templates are applied in the repair process in accordance with professional standards and enterprise requirements</p> <p>3.2. Materials are cut, formed, aligned and joined in accordance with professional standards and enterprise requirements</p> <p>3.3. Advice and assistance is sought from others as required</p> <p>3.4. On going checks of the quality of the repair process are undertaken in accordance with professional standards and practices and quality procedures</p> <p>3.5. Tests and observations are interpreted to confirm the acoustic guitar is compliant with the specifications</p>

ELEMENT	PERFORMANCE CRITERIA
	and professional standards
4. Finish surfaces	<p>4.1. Surface finish materials are prepared for application in accordance with manufacturer specifications and enterprise requirements</p> <p>4.2. Repaired acoustic guitar surface is prepared for finishing in accordance with customer specifications and enterprise requirements</p> <p>4.3. Repaired acoustic guitar surface is finished and refinished in accordance with customer specifications and enterprise requirements</p> <p>4.4. On going checks of the quality of the finishing process are undertaken in accordance with professional standards and practices and quality procedures</p>
5. Finalise repair processes	<p>5.1. Final checks and tests of the quality of the acoustic guitar repairs are undertaken in accordance with customer specifications, professional standards and practices and quality procedures</p> <p>5.2. Repair and other records are completed in accordance with enterprise requirements and standards</p> <p>5.3. Housekeeping is conducted in accordance with enterprise requirements and professional standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand materials technology and information related to acoustic guitars
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to instrument repair
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in timber and/or repair components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of repair techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of repair components including computers, measuring devices and assembly systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- characteristics of heritage or antique instruments
- characteristics, capabilities and limitations of the timbers traditionally used in the manufacture and repair of acoustic guitars
- characteristics of timber, timber products and defects
- properties of staining and finishing materials
- cutting patterns and sequences
- cutting tool condition assessment
- industry standard cross-sections and lengths
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
 - safely perform repair functions
 - plan the repair of an acoustic guitar
 - prepare for the repair of an acoustic guitar
 - repair of acoustic guitar
 - apply the quality and professional standards required when repairing an acoustic guitar
 - surface finish an acoustic guitar
 - finalise the manufacturing process.

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the repair of acoustic guitars
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
Assessment methods must confirm consistency and

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Work order

- is used to determine job requirements including design, tolerances, process, materials, finish and quantity

Appropriate personnel

- may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include but are not limited to measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, air compressor and hoses, clamps screwdrivers, pincers • and may include special tools such as side moulds, blocks, cramps, cradles, contour and step gauges, arching and thickness plane.
Workplace environment	<ul style="list-style-type: none"> • may be a small, medium or large workplace • may be involved in the manufacture or repair of violins, violas, cellos, mandolins, banjos, dulcimers, guitars and other musical instruments
Materials	<ul style="list-style-type: none"> • may include, but is not limited to timber, veneers, manufactured board, glues, screws, nails, dowels • may include various timbers that are traditionally used in these instruments • may include surface finish materials such as lacquers, shellac, wax, oil, stripper, spirit stains, water stains
Information and procedures may include:	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawing and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMI4002A Repair electric guitars

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the work involved in repair of electric guitars.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The repair of electric guitars applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson/ level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for repair	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to the repair of electric guitars are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Customer requirements are received, analysed and confirmed in accordance with enterprise procedures</p> <p>1.4. Specifications are drawn up and required materials are identified in accordance with enterprise procedures</p> <p>1.5. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Prepare for repair	<p>2.1. Electric guitar is cleaned and examined and required repairs are determined in accordance with customer's and enterprise requirements</p> <p>2.2. Required materials for the repair of the electric guitar are acquired inspected and tested in accordance with enterprise procedures</p> <p>2.3. Required jigs and templates for the repair of the electric guitar are identified and acquired in accordance with enterprise procedures</p> <p>2.4. Tools, test and measurement instruments, consumable and other equipment required for the repair of the electric guitar are identified, selected and obtained in accordance with enterprise procedure</p>
3. Repair instruments	<p>3.1. Tools, jigs and templates are applied in the manufacturing process in accordance with professional standards and enterprise requirements</p> <p>3.2. Materials are cut, formed, aligned and joined in accordance with professional standards and enterprise requirements</p> <p>3.3. Electronics are located, removed, replaced, connected and wired up in accordance with professional standards and enterprise requirements</p> <p>3.4. Advice and assistance is sought from others as required</p> <p>3.5. On going checks of the quality of the manufacturing process are undertaken in accordance with professional standards and practices and quality</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>procedures</p> <p>3.6. Tests and observations are interpreted to confirm the electric guitar is compliant with the specifications and professional standards</p>
4. Finish surfaces	<p>4.1. Surface finish materials are prepared for application in accordance with manufacturer specifications and enterprise requirements</p> <p>4.2. Repaired electric guitar surface is prepared for finishing in accordance with customer specifications and enterprise requirements</p> <p>4.3. Repaired electric guitar surface is finished and refinished in accordance with customer specifications and enterprise requirements</p> <p>4.4. On going checks of the quality of the finishing process are undertaken in accordance with professional standards and practices and quality procedures</p>
5. Finalise repair processes	<p>5.1. Final checks and tests of the quality of the electric guitar repairs are undertaken in accordance with customer specifications, professional standards and practices and quality procedures</p> <p>5.2. Repair and other records are completed in accordance with enterprise requirements and standards</p> <p>5.3. Housekeeping is conducted in accordance with enterprise requirements and professional standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand materials technology and information related to electric guitar products
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to instrument repair
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in materials and/or repair components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of repair techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of repair components including computers, measuring devices and assembly systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- characteristics, capabilities and limitations of the materials traditionally used in the manufacture of electric guitars
- selecting testing and replacing the electronic components of an electric guitar
- characteristics, capabilities and limitations of the electric guitars being repaired
- properties of finishing materials
- cutting tool condition assessment
- industry standard cross-sections and lengths
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
 - safely perform repair functions
 - plan the repair of an electric guitar
 - prepare for the repair of an electric guitar
 - select, test and replace the electric components of an electric guitar
 - apply the quality and professional standards required when repairing an electric guitar
 - surface finish an electric guitar
 - finalise the repair process

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the manufacture of electric guitars
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

EVIDENCE GUIDE

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Work order

- is used to determine job requirements including design, tolerances, process, materials, finish and quantity

Appropriate personnel

- may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include but are not limited to measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, air compressor and hoses, clamps screwdrivers, pincers • and may include special tools such as side moulds, blocks, cramps, cradles, contour and step gauges, arching and thickness plane.
Workplace environment	<ul style="list-style-type: none"> • may be a small, medium or large workplace • may be involved in the manufacture or repair of violins, violas, cellos, mandolins, banjos, dulcimers, guitars and other musical instruments
Materials	<ul style="list-style-type: none"> • may include various timbers metals and other materials that are traditionally used in these instruments • may include surface finish materials such as lacquers, fillers, sealers, shellac, wax, oil stripper, spirit stains, water stains • may include electronic components such as pick ups, pick up selector, vibrato, volume and tone potentiometers, jack socket
Information and procedures may include:	<ul style="list-style-type: none"> • workplace procedures relating to the use and operation of tools and equipment • workplace instructions, including job sheets, plans, drawing and designs • workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMI4003A Repair special stringed instruments

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the work involved in the repairing of special stringed instruments, specifically banjos, mandolins and dulcimers, including antique or heritage instruments.</p> <p>The required outcomes specified in this unit of competency contain applicable facets of employability skills. When analysing the skills and knowledge included in this unit of competency, the Qualifications Employability Skills Summary in which the unit of competency is packaged, will assist in verifying employability skill requirements.</p>
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Application of the Unit

Application of the unit	<p>This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The repair of special stringed instruments applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson/ level. These skills and knowledge are to be used within the scope of the person's job and authority.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for repair	<p>1.1. Applicable <i>OH&S, legislative</i> and <i>organisational</i> requirements relevant to the repair of special stringed instruments are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Customer requirements are received, analysed and confirmed in accordance with enterprise procedures</p> <p>1.4. Specifications are drawn up and required materials are identified in accordance with enterprise procedures</p> <p>1.5. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Prepare for repair	<p>2.1. Stringed instrument is cleaned and examined and required repairs are determined in accordance with customer's and enterprise requirements</p> <p>2.2. Required materials for the repair of the special stringed instrument are acquired, inspected and tested in accordance with enterprise procedures</p> <p>2.3. Tools, test and measurement instruments, consumables and other equipment required for the repair of the special stringed instrument are identified, selected and obtained in accordance with enterprise procedures</p>
3. Repair special stringed instruments	<p>3.1. Tools, jigs and templates are applied in the repair process in accordance with professional standards and enterprise requirements</p> <p>3.2. Materials are cut, formed, aligned and joined in accordance with professional standards and enterprise requirements</p> <p>3.3. Advice and assistance is sought from others as required</p> <p>3.4. On going checks of the quality of the repair process are undertaken in accordance with professional standards and practise and quality procedures</p> <p>3.5. Tests and observations are interpreted to confirm the special stringed instrument is compliant with the specifications and professional standards</p>
4. Finish surfaces	<p>4.1. Surface finish materials are prepared for application in accordance with manufacturers' specifications and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>enterprise requirements</p> <p>4.2.Special stringed instrument surface is prepared for finishing in accordance with customer's specifications and enterprise requirements</p> <p>4.3.Special stringed instrument surface is finished and refinished in accordance with customer's specifications and enterprise requirements</p> <p>4.4.Ongoing checks of the quality of the finishing process are undertaken in accordance with professional standards and practices and quality procedures</p>
5. Finalise repair processes	<p>5.1.Final checks and tests of the quality of the repaired special stringed instruments are undertaken in accordance with customer's specifications, professional standards and practices and quality procedures</p> <p>5.2.Repair and other records are completed in accordance with enterprise requirements and standards</p> <p>5.3.Housekeeping is conducted in accordance with enterprise requirements and professional standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand timber technology and information related to special stringed instrument products
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to instrument repair
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in timber and/or repair components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of repair techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of repair components including computers, measuring devices and assembly systems

Required knowledge

- State or Territory OH&S legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- characteristics, capabilities and limitations of the timbers traditionally used in the manufacture of special stringed instruments
- characteristics of heritage and antique instruments
- characteristics of timber, timber products and defects
- properties of staining and finishing materials
- cutting patterns and sequences
- cutting tool condition assessment
- industry standard cross-sections and lengths
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
 - safely perform repair functions
 - plan the repair of a special stringed instrument
 - prepare for the repair of a special stringed instrument
 - repair a special stringed instrument
 - apply the quality and professional standards required when repairing a special stringed instrument
 - apply the final finish to a special stringed instrument
 - finalise the repair process

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the repair of special stringed instruments
 - specifications and work instructions

EVIDENCE GUIDE**Method of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OH&S requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OH&S, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OH&S, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Work order	<ul style="list-style-type: none"> is used to determine job requirements including design, tolerances, process, materials, finish and quantity
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include, but are not limited to measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, air compressor and hoses, clamps screwdrivers, pincers, • and may include special tools such as side moulds, blocks, cramps, cradles, contour and step gauges, arching and thickness plane.
Workplace environment	<ul style="list-style-type: none"> • may be a small, medium or large workplace • may be involved in the manufacture or repair of violins, violas, cellos, mandolins, banjos, dulcimers, guitars and other musical instruments
Materials	<ul style="list-style-type: none"> • may include, but is not limited to timber, veneers, manufactured board, glues, screws, nails, dowels • may include various timbers that are traditionally used in these instruments • may include surface finish materials such as lacquers, shellac, wax, oil, stripper, spirit stains, water stains
Information and procedures may include:	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawing and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFMI4004A Repair stringed instruments

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the work involved in the repairing of stringed instruments, specifically violins, violas and cellos, including antique or heritage instruments.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The repair of stringed instruments applies to a relevant workplace environment and involves application of skills and knowledge at a tradesperson/ level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for repair	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to the repair of stringed instruments are verified and complied with</p> <p>1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. Customer requirements are received, analysed and confirmed in accordance with enterprise procedures</p> <p>1.4. Specifications are drawn up and required materials are identified in accordance with enterprise procedures</p> <p>1.5. Communication with others involved with the work is established and maintained to ensure efficient workflow coordination, personnel cooperation and safety throughout the application of this competency</p>
2. Prepare for repairs	<p>2.1. Stringed instrument is cleaned and examined and required repairs are determined in accordance with customer and enterprise requirements</p> <p>2.2. Required materials for the repair of the stringed instrument are acquired, inspected and tested in accordance with enterprise procedures</p> <p>2.3. Required jigs and templates for the repair of the stringed instrument are identified and acquired in accordance with enterprise procedures</p> <p>2.4. Tools, test and measurement instruments, consumables and other equipment required for the repair of the stringed instrument are identified, selected and obtained in accordance with enterprise procedures</p>
3. Repair instruments	<p>3.1. Tools, jigs and templates are applied in the repair process in accordance with professional standards and enterprise requirements</p> <p>3.2. Materials are cut, formed, aligned and joined in accordance with professional standards and enterprise requirements</p> <p>3.3. Advice and assistance is sought from others as required</p> <p>3.4. On going checks of the quality of the manufacturing process are undertaken in accordance with professional standards and practise and quality procedures</p> <p>3.5. Tests and observations are interpreted to confirm the</p>

ELEMENT	PERFORMANCE CRITERIA
	stringed instrument is compliant with the specifications and professional standards
4. Finish surfaces	<p>4.1. Surface finish materials are prepared for application in accordance with repair specifications and enterprise requirements</p> <p>4.2. Stringed instrument surface is prepared for finishing in accordance with customer specifications and enterprise requirements</p> <p>4.3. Stringed instrument surface is finished and refinished in accordance with customer specifications and enterprise requirements</p> <p>4.4. Ongoing checks of the quality of the finishing process are undertaken in accordance with professional standards and practices and quality procedures</p>
5. Finalise repair processes	<p>5.1. Final checks and tests of the quality of the special stringed instruments are undertaken in accordance with customer specifications, professional standards and practices and quality procedures</p> <p>5.2. Repair and other records are completed in accordance with enterprise requirements and standards</p> <p>5.3. Housekeeping is conducted in accordance with enterprise requirements and professional standards</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand timber technology and information related to stringed instrument products
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to instrument repair
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in timber and/or repair components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of repair techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of repair components including computers, measuring devices and assembly systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for machining material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- characteristics, capabilities and limitations of the timbers traditionally used in the manufacture and repair of stringed instruments
- characteristics of timber, timber products and defects
- properties of staining and finishing materials
- cutting patterns and sequences
- cutting tool condition assessment
- industry standard cross-sections and lengths
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered

- Read and interpret a work/job specification
- Effectively conduct operator maintenance on tools and equipment
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures
- Communicate effectively and work safely with others in the work area
- Assessment must confirm appropriate knowledge and skills to:
 - safely perform repair functions
 - prepare for the repair of a stringed instrument
 - repair a stringed instrument
 - apply the quality and professional standards required when repairing a stringed instrument
 - finalise the repair process

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the repair of stringed instruments
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
 Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of

EVIDENCE GUIDE

	<p>underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>
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Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Work order	<ul style="list-style-type: none"> is used to determine job requirements including design, tolerances, process, materials, finish and quantity
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to supervisors, suppliers, clients, colleagues and managers

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include but are not limited to measuring tapes or rules, hammers, mallets, squares, bevels, chisels, planes, hand saws, power saws, power drills/screwdrivers, air compressor and hoses, clamps screwdrivers, pincers • and may include special tools such as side moulds, blocks, cramps, cradles, contour and step gauges, arching and thickness plane, brass bar clamp.
Workplace environment	<ul style="list-style-type: none"> • may be a small, medium or large workplace • may be involved in the manufacture or repair of violins, violas, cellos, mandolins, banjos, dulcimers, guitars and other musical instruments
Materials	<ul style="list-style-type: none"> • may include, but are not limited to timber, veneers, manufactured board, glues, screws, nails, dowels • may include various timbers that are traditionally used in these instruments • may include surface finish materials such as lacquers, shellac, wax, oil, stripper, spirit stains, water stains
Information and procedures may include:	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawing and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Musical Instruments
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF1001B Frame a simple artwork

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to design, fabricate components and assemble a simple artwork package.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Design package	1.1. Artwork to be framed is identified and its qualities and framing requirements assessed 1.2. A provisional design package is developed 1.3. Design is modified as required and approved in accordance with workplace procedures 1.4. Work sequence is planned to suit the job
2. Cut and join mouldings	2.1. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 2.2. Tools, equipment and materials required for cutting and joining of mouldings are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety 2.3. Material is set out for cutting to length according to work instructions and workplace procedures 2.4. Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications 2.5. Mouldings are cut to length and checked for quality and fit in accordance with workplace practices 2.6. Components are laid out and fixed in preparation for joining according to work instructions and workplace procedures 2.7. Components are joined and checked for quality, alignment and finish according to workplace practices
3. Cut mat board	3.1. Tools, equipment and materials required for cutting mat board are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety 3.2. Mat board material is set out for cutting according to work instructions and workplace procedures 3.3. Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications 3.4. Mat boards are cut and checked for quality in accordance with workplace practices
4. Cut glass for framing	4.1. Tools, equipment and materials required for cutting glass are selected and checked prior to use to ensure that they are appropriate for the work in terms of

ELEMENT	PERFORMANCE CRITERIA
	<p>quality, serviceability and safety</p> <p>4.2. Glass is set out for cutting according to work instructions and workplace procedures</p> <p>4.3. Tools, machines and equipment are used in accordance with safety requirements and manufacturers' specifications</p> <p>4.4. Glass is cut and checked for quality in accordance with workplace practices</p>
5. Mount artwork	<p>5.1. Method of mounting is determined</p> <p>5.2. Mounting equipment is set up according to operating procedures and workplace practice</p> <p>5.3. Artwork is positioned on substrate according to job requirements and placed in mounting equipment</p> <p>5.4. Mounting equipment is operated in accordance with manufacturer instructions and workplace procedures</p> <p>5.5. Assembled artwork is removed from equipment, inspected for quality in accordance with workplace procedures</p>
6. Assemble artwork package	<p>6.1. Fabricated components are cleaned and laid out for assembly in accordance with workplace procedures</p> <p>6.2. Artwork is attached to backing material using the selected method</p> <p>6.3. Frame components are assembled, adjusted as required to fit and fixed</p> <p>6.4. Frame is fitted over package and the backing is fixed in accordance with workplace procedures</p> <p>6.5. Fittings, attachments and hanging aids are attached in accordance with workplace procedures</p> <p>6.6. Package is inspected for quality and processed in accordance with workplace procedures</p>
7. Complete work	<p>7.1. Work area is cleaned, hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures</p> <p>7.2. Off-cuts and unused materials are collected and stored for reuse or disposed following workplace procedures</p> <p>7.3. Waste and scrap materials are dealt with following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination with work supervisor, other workers and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate working problems, avoid re-working and wastage
- use the limited workplace technology related to the framing of simple artwork, including tools, equipment, materials and measuring devices

Required knowledge

- design requirements for simple artwork
- the preparation of plans/drawings/set-outs
- workflow and steps in relation to framing simple artwork
- identification of hand and basic picture framing processing tools, materials, equipment, processes and procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work instructions and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - achieve required production output and product quality
- Adapt or vary glass and glazing designs
- As a minimum, design, prepare, fabricate and assemble at least one item of simple artwork
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Access to plans/designs, picture framing hand tools and/or basic processing machines, equipment, materials, a work area and a specified project.

Method of assessment

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be conducted in conjunction with assessment of the other sector specialist unit of competency where appropriate.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • Workplace health and safety requirements include OHS legislation, building codes, material safety management systems, hazardous substances and dangerous goods code and local safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work involves reading and interpreting plans, developing set-outs, using hand and power tools, operating basic machinery, applying quality requirements and applying product finishing techniques and materials • Work is conducted under supervision and guidance
<p>Simple artwork</p>	<ul style="list-style-type: none"> • Simple artwork is flat paper-based artwork not requiring any conservation measures • Project and design is to be determined in consultation with supervisor/teacher
<p>Tools and equipment</p>	<p>Tools and equipment to be used under supervision and guidance may include, but is not limited to:</p> <ul style="list-style-type: none"> • guillotines, static mounted circular saws, drop saws, docking saws and mitre saws • underpinners (V-nailers), screwdrivers • hand-operated tools, including cutting blades, clamps, marking out tools • mat cutters • appropriate mounting tools and equipment • flat felt-covered cutting table, glass cutters, squares, tape measures, marking pens/pencils
<p>Materials to be used may include but not limited to:</p>	<ul style="list-style-type: none"> • timber, touch-up materials, glues, sandpaper • standard mat board material

RANGE STATEMENT	
	<ul style="list-style-type: none"> • appropriate mounting materials • glass
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • gloves • safety glasses • gauntlets • footwear • earmuffs • aprons and overalls

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF2001B Use picture framing sector hand and power tools

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers work involving the use of hand and power tools in applications relating to the picture framing sector of the furnishing industry.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hand and power tools	1.1.Types of hand and power tools and their functions identified 1.2.Sources of, and access to power supply recognised 1.3.OHS requirements for using hand and power tools recognised and implemented
2. Select appropriate hand tools	2.1.Hand tools selected consistent with needs of job 2.2.Hand tools are checked for serviceability and safety and any faults reported to supervisor in accordance with enterprise procedures 2.3.Equipment selected to hold, position or support material for power tools application where applicable
3. Use appropriate hand tools	3.1.Material located and held in position for hand tool application 3.2.Hand tools safely and effectively used according to their intended use 3.3.Hand tools safely located when not in immediate use
4. Select appropriate power tools	4.1.Appropriate personal protective equipment selected, correctly fitted and used 4.2.Power tools selected consistent with needs of job in accordance with conventional work practice 4.3.Power tools visually checked for serviceability/safety in accordance with OHS requirements and any faults reported to supervisor in accordance with enterprise procedures 4.4.Equipment selected to hold, position or support materials for power tool application where applicable
5. Use appropriate power tools	5.1.Material located and held in position for power tool application where applicable 5.2.Power tools safely and effectively used in application processes 5.3.Power tools safely switched and located when not in use
6. Clean up work area and tools	6.1.All tools cleaned, maintained and stored 6.2.Equipment cleaned, maintained and stored 6.3.Documentation completed in accordance with enterprise procedures 6.4.Work area cleaned and waste removed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- correctly and safely select, use and maintain hand and power tools
- meet quality standards of finish
- communicate effectively with supervisors and other workers

Required knowledge

- workflow within the workplace
- workplace safety requirements and OHS legislation
- function and purpose of hand and power tools used in the workplace

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Demonstrate compliance with OHS regulations applicable to workplace operations
- Adopt and carry out correct procedures prior to, during and after use of hand and power tools
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, tools, equipment or products
 - maintain required production output and product quality
- Demonstrate the safe and effective use of the listed hand and power tools required by the picture framing sector in performing tasks for which they are to be used
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Indicate compliance with organisational policies and procedures, including quality assurance requirements

Resource implications

Picture framing sector hand and power tools, materials used in the manufacturing and/or processing of picture framing products, operating procedures, work area and workplace requirements.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which together form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- This unit covers work involving the use of hand and power tools in applications relating to the picture framing sector of the furnishing industry
- Work requires individuals to demonstrate skill, accuracy and dexterity in the application of tools to work tasks
- Work is carried out in accordance with statutory requirements, OHS legislation, environmental legislation, manual handling procedures, relevant health regulations and organisation insurance requirements

Workplace environment

- Work may be conducted in large, medium or small workplaces
- OHS requirements may include safe working practices, use of tools and equipment, use of power tools, safe handling and storage of materials in accordance with enterprise procedures
- Reporting of faults in the operation of hand and power tools may be verbal or written

Hand tools used in the picture framing sector are to include:

- hand saws
- chisels
- underpinners
- screwdrivers
- marking out tools
- pincers
- pliers (including stretching pliers)
- files
- glass cutters
- squares
- measures
- hammers
- spirit level

RANGE STATEMENT	
	<ul style="list-style-type: none"> • guillotine • cutting blades • clamps • needles • knives • scissors • plane • glass pliers • scoring tool • framer's points gun • ATG dispenser • nail punch <p>Hand tools include hand-operated mechanical tools such as the pneumatic V-nailer</p>
Power tools used in the picture framing sector are to include:	<ul style="list-style-type: none"> • power saws (circular drop docking and mitre) • power drills • guillotine • V-nailers • compressor and air guns (including tackers) • staplers • flexi point) • hand power saw and power screwdriver
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • gloves • safety glasses • ear protection • safety footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Hand and power tool manufacturer specifications and operational procedures • Workplace procedures relating to OHS, tool handling and operation, reporting and communication • Work instructions, including job sheets, plans,

RANGE STATEMENT	
	drawings and designs

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF2002B Cut mouldings to length

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to cut frame mouldings to the required length with guillotines, saws or other equipment.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for installation	1.1. Patterns, work instructions and/or plans are read and interpreted to identify: <ul style="list-style-type: none"> 1.1.1. type of moulding to be cut 1.1.2. pattern or plan to be followed 1.1.3. process required to complete work tasks 1.1.4. number of items to be cut and holding area for completed items 1.1.5. equipment settings for the materials that are being cut 1.1.6. required cutting fluids 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. The process for obtaining materials/components and moving completed work to the next process is identified 1.4. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety 1.5. Cutting equipment components and controls, including emergency stops and guards, are identified 1.6. Work sequence is planned to suit the job
2. Conduct cutting operation	2.1. Equipment is operated and monitored to ensure correct cut quality, output and that wastage is within allowable limits 2.2. Problems occurring during work operations are identified and reported to appropriate persons 2.3. Authorised changes in working procedures are followed 2.4. Routine lubrication and adjustments for the equipment are completed 2.5. Items which do not meet quality requirements are repaired or discarded 2.6. Finished work is inspected for compliance with work order, workplace requirements and finish
3. Complete work	3.1. Scraps and off-cuts are removed for disposal/recycling as required by workplace procedures 3.2. Work area is cleaned and rubbish disposed of as

ELEMENT	PERFORMANCE CRITERIA
	<p>appropriate</p> <p>3.3. Workplace documentation is completed as required</p> <p>3.4. Tools, equipment and unused materials are cleaned and stored following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use the limited workplace technology related to the cutting of frame mouldings, including drawing aids, tools, equipment, calculators and measuring devices

Required knowledge

- the type, characteristics, uses and limitations of moulding materials
- the types, characteristics and applications of cutting machines and devices
- the types, uses and operation of tools
- techniques for cutting frame mouldings
- workplace safety system requirements related to cutting frame mouldings
- workflow in relation to cutting frame mouldings

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Identify and operate equipment, including the use of safety cut outs and guards
- Identify materials, ensuring quality and aesthetics, to be used in the work process
- Interpret work order and locate and apply relevant information to set up, operate, adjust and monitor equipment used to cut picture frame mouldings
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Cut mouldings for a picture frame (up to 100 mm wide) of each of the following materials:
 - timber (multi-angle and 45 degrees)
 - aluminium (45 degrees)
 - synthetic (45 degrees)
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Guillotines, static mounted circular saws, docking saws and mitre saws fitted with appropriate blades, standard operating procedures, unprocessed materials and work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of

EVIDENCE GUIDE	
	competency which form a part of the job role.
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant frame moulding cutting machines /devices, framing materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up, operation, adjustment and monitoring of equipment used to cut picture frame mouldings • Work may be performed in workplaces which are involved in the framing of a wide range of items, including, but not limited to: <ul style="list-style-type: none"> • original artwork • reproductions • photographs • documents • three-dimensional items
<p>Cut mouldings</p>	<ul style="list-style-type: none"> • Addresses the work involved in the set up, operation, adjustment and monitoring of equipment used to cut picture frame mouldings • Mouldings are to include but are not limited to: solid timber, composites, metal and alloy extrusion and synthetics
<p>Machines may include, but are not limited to:</p>	<ul style="list-style-type: none"> • guillotines • static mounted circular saws • drop saws • docking saws and mitre saws
<p>Personal protection equipment</p>	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices</p>

RANGE STATEMENT	
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF2003B Join mouldings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to join mouldings to form frames.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1. Patterns, work instructions and/or plans are read and interpreted to identify:</p> <ul style="list-style-type: none"> 1.1.1. size of the frames 1.1.2. types of attachments to be used 1.1.3. required materials and tools 1.1.4. quality requirements for the frames 1.1.5. assembly steps and sequence <p>1.2. Workplace health and safety requirements relevant to the operation of joining mouldings, including personal protection needs, are observed throughout the work</p> <p>1.3. The process for obtaining materials/components and moving completed work to the next process is identified</p> <p>1.4. Required components, attachments, tools and equipment are identified</p> <p>1.5. Work sequence is planned to suit the job</p>
2. Prepare for frame assembly	<p>2.1. Components of the frame are selected and checked against work instructions for:</p> <ul style="list-style-type: none"> 2.1.1. size 2.1.2. number 2.1.3. pattern and finish 2.1.4. profile <p>2.2. Fixing and joining devices are selected in line with work instructions and type of moulding to be joined</p> <p>2.3. Other tools, equipment (including jigs) and materials are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety</p> <p>2.4. Shortages/defective items are notified in accordance with workplace practices</p>
3. Assemble frame	<p>3.1. Components are laid out and joined using:</p> <ul style="list-style-type: none"> 3.1.1. jig (if required) 3.1.2. appropriate fastenings 3.1.3. appropriate tools and equipment <p>3.2. Assembled frame is checked for:</p> <ul style="list-style-type: none"> 3.2.1. alignment 3.2.2. pattern matching (if appropriate)

ELEMENT	PERFORMANCE CRITERIA
	<p>3.2.3. correct number and fitting of fasteners and other attachments</p> <p>3.2.4. conformity to work instruction and quality requirements</p> <p>3.3. Corners are finished in accordance with workplace requirements</p> <p>3.4. Joined frames are stored according to workplace requirements</p>
4. Complete work	<p>4.1. Completed frames are inspected for quality, with those not meeting specification being repaired or tagged for further processing or recycling/disposal</p> <p>4.2. Tools, equipment and unused materials are cleaned and stored following workplace procedures</p> <p>4.3. Equipment faults are identified, tagged and reported to appropriate personnel</p> <p>4.4. Work area is cleaned and rubbish disposed of as appropriate</p> <p>4.5. Workplace documentation is completed as required</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use the limited workplace technology related to the joining of picture frame mouldings, including design aids, tools, equipment, calculators and measuring devices

Required knowledge

- the type, characteristics, uses and limitations of moulding materials
- workplace safety system requirements related to joining picture frame mouldings
- workflow in relation to frame production
- operation of tools and equipment used in the assembly process
- identification of equipment, processes and procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Identify and assemble components, attachments, tools and materials required to join picture frames to specification and required pattern (including pattern matching)
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum demonstrate the ability to join each of the following frames (at least one of them being a multi-angle frame) up to a width of 100 mm:
 - synthetic
 - timber
 - aluminium
 - and each in the following profiles:
 - flat
 - traditional
 - reverse
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Timber, metal or synthetic mouldings, frame components, consumables, workplace procedures, appropriate work area, tools and equipment.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

EVIDENCE GUIDE	
	<p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which together form a part of the job role.</p>
Context of assessment	<p>Assessment may occur on the job or in a workplace simulated facility with relevant frame joining equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	The work involved in the planning, preparation and assembly of picture frame mouldings to form frames
Unit context	<ul style="list-style-type: none"> • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the assembly of mouldings • OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work may be performed in workplaces which are involved in the manufacture and assembly of picture frame mouldings or in the framing of items, including, original and reproduction artwork, photographs and documents
Tools and equipment are to include:	<ul style="list-style-type: none"> • underpinners (pneumatic or power V-nailer) • V-nails • drill • nail punch • screwdrivers • touch-up material • glues and finishing tools • including files and sandpaper
Moulding materials include, but are not limited to:	<ul style="list-style-type: none"> • solid timber • composites • metal and alloy extrusion • synthetics • filler • putties

RANGE STATEMENT	
	<ul style="list-style-type: none"> • touch-up pens and paints/stains
Personal protection equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Machine and moulding manufacturer specifications • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF2004B Mount artwork

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to mount artwork to substrates prior to framing. It includes dry and wet mounting, pressure rolling, laminating and hinging of artwork.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Artwork is assessed to determine the most appropriate mounting process, including the composition of substrate and fixing materials</p> <p>1.2. Work requirements are identified from drawings/specifications/instructions and/or workplace practices</p> <p>1.3. Quality assurance requirements are identified and observed throughout the process in accordance with industry standards and workplace practices</p> <p>1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety</p> <p>1.6. Materials required are cut to size and assembled to industry standard and workplace procedures</p> <p>1.7. Fixing agents (adhesives/plastic film/tissue) are positioned in accordance with workplace procedures</p>
2. Dry mount artwork	<p>2.1. Mounting equipment is set up according to operating procedures and workplace practices</p> <p>2.2. Artwork is positioned on substrate according to job requirements and placed in mounting press</p> <p>2.3. Mounting press is operated in accordance with manufacturer instructions, ensuring correct mounting temperature and/or pressing period</p> <p>2.4. Assembled artwork is removed from press, inspected for quality and stored in accordance with workplace procedures</p>
3. Wet mount artwork	<p>3.1. Mounting equipment is set up according to operating procedures and workplace practices</p> <p>3.2. Selected adhesive is prepared and applied to the substrate with regard for the type and composition of artwork to be mounted</p> <p>3.3. Artwork is wet mounted to substrate according to job requirements and placed in vacuum press</p> <p>3.4. Mounting press is operated in accordance with manufacturer instructions, ensuring correct pressing period</p> <p>3.5. Assembled artwork is removed from press, inspected for quality and stored in accordance with workplace</p>

ELEMENT	PERFORMANCE CRITERIA
	procedures
4. Pressure roller mount artwork	4.1. Rolling equipment is set up according to manufacturer instructions and workplace practices 4.2. Artwork is laminated using cold film in accordance with job requirements and workplace practices 4.3. Assembled artwork is inspected for quality and stored in accordance with workplace procedures
5. Laminate artwork	5.1. Laminating equipment is set up according to manufacturer instructions and workplace practices 5.2. Artwork is laminated in accordance with job requirements and workplace practices 5.3. Laminated artwork is inspected for quality and stored in accordance with workplace procedures
6. Hinge artwork to substrate	6.1. Hinging paper/pre-made hinging tape is assessed for compliance with job requirements 6.2. Starch paste is mixed to correct consistency and applied in conformance with workplace practices 6.3. Hinging paper is torn and fixed to artwork and substrate in accordance with workplace procedures 6.4. Hinged artwork is inspected for quality and positioned for further processing in accordance with workplace procedures
7. Complete work	7.1. Defective work is reported in accordance with workplace procedures 7.2. Scraps and off-cuts are removed for disposal/recycling as required by workplace procedures 7.3. Equipment and work area are cleaned in accordance with workplace procedures 7.4. Workplace documentation is completed as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate mounting problems, avoid re-working and wastage
- use the limited workplace technology related to mounting artwork, including tools, equipment, calculators and measuring devices

Required knowledge

- the type, characteristics, uses and limitations of the various methods of mounting artwork
- the techniques, method, equipment and materials used to mount artwork
- types of artwork suitable for the various techniques of mounting artwork and the characteristics and interactions between the materials used
- quality and aesthetic requirements in mounting artwork
- workplace safety system requirements related to mounting artwork
- workflow in relation to mounting artwork
- awareness of the effect of this process on the artwork

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Identify, adjust and safely operate equipment
- Identify materials, ensuring quality and aesthetics, to be used in the work process
- Interpret work order and locate and apply relevant information to set up, operate, adjust and monitor equipment used to appropriately mount artwork
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to mount items of artwork in each form of mounting:
 - wet
 - dry
 - laminating
 - pressure roller
 - hinging
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate mounting and/or laminating equipment for the technique being assessed, artwork, consumables. standard operating procedures and work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be

EVIDENCE GUIDE	
	in conjunction with assessment of other units of competency which together form a part of the job role.
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant mounting equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the mounting of artwork
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures
- Work may be performed in workplaces which are involved in the framing of a wide range of items, including, but not limited to those:
 - for dry mounting original paper-based artwork, reproduction artwork, photographs, photographic reproductions, documents and posters
 - for wet mounting/laminating reproduction artwork and promotional materials

Mounting artwork

- Artwork may be mounted to selected substrates by:
- dry mounting paper-based artwork using heat press and cold press
 - wet mounting paper and canvas-based artwork using adhesives and vacuum press
 - laminating paper-based artwork using pressure roller or laminating equipment
 - hinging, prefabricated or custom made

Tools and equipment

- For dry mounting, tools and equipment are to include:
 - hard bed heat press
 - soft bed heat press
 - tacking iron
 - piercing tool

RANGE STATEMENT

	<ul style="list-style-type: none"> • cutting blades • measuring tapes and marking out tools • overlay effect sheets • silicone release paper • Teflon and foam plastic blankets • For wet mounting, tools and equipment are to include: <ul style="list-style-type: none"> • vacuum press • cutting blades • measuring tapes and marking out tools • scrapers • glue/adhesive applicators (rollers and spray guns) • For pressure mounting, tools and equipment are to include: <ul style="list-style-type: none"> • pressure rolling equipment, • cold film • cutting blades • measuring tapes and marking out tools • For laminating, tools and equipment are to include: <ul style="list-style-type: none"> • cold roller laminator • laminating equipment • cutting blades • measuring tapes and marking out tools • For hinging, tools and equipment are to include: <ul style="list-style-type: none"> • straight edge • thin brush • weight bags • mixing vessel and swizzle • steam generator • microwave oven
For dry mounting materials may include, but not limited to:	<ul style="list-style-type: none"> • medium density fibreboard (MDF) • foam core • screen board • mat board • heat and pressure sensitive films and tissues
For wet mounting materials	<ul style="list-style-type: none"> • medium density fibreboard (MDF)

RANGE STATEMENT	
may include, but not limited to:	<ul style="list-style-type: none"> • foam core • screen board and glues • adhesives
For laminating materials may include, but not limited to:	<ul style="list-style-type: none"> • plastic film
For hinging materials may include, but not limited to:	<ul style="list-style-type: none"> • hinging paper (mulberry paper and rice paper) • pre-made hinging tape • wheat starch • distilled water and methyl cellulose
Personal protection equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices. It may include overalls, boots and breathing protection.
Defects in artwork may include but not be limited to:	<ul style="list-style-type: none"> • lumps and bumps • adhesive migration • misalignment and use of incorrect adhesive
Adhesives are to include:	<ul style="list-style-type: none"> • ethyl vinyl adhesive (EVA) • poly vinyl adhesive (PVA) • starch paste • heat and pressure sensitive tissues and films
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Manufacturer instructions for the use of equipment and materials • Workplace procedures relating to OHS, reporting and communications • Work instructions, including job sheets, plans, drawings and designs

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF2005B Cut mat boards

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to cut out simple mat boards by hand or machine for the mounting of artwork.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for cutting	<p>1.1. Patterns, dimensions, materials and quantities are identified from work/job instructions</p> <p>1.2. Workplace health and safety requirements relevant to the operation of cutting basic mat boards, including personal protection needs, are observed throughout the work</p> <p>1.3. The process for obtaining materials/components and moving completed work to the next process is identified</p> <p>1.4. Work area, tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety</p> <p>1.5. Appropriate mat cutting machines are selected for the required cut and suitable blades are selected, fitted and adjusted for angled, circular or oval cuts</p> <p>1.6. Cutting equipment components and controls are identified</p> <p>1.7. Board material is selected following work order or specification and laid out to meet requirements and minimise waste</p> <p>1.8. Work sequence is planned to suit the job</p>
2. Conduct cutting operation	<p>2.1. Equipment is operated and monitored to ensure correct cut quality, output and that wastage is within allowable limits</p> <p>2.2. Problems occurring during work operations are identified and reported to appropriate persons</p> <p>2.3. Routine equipment adjustments are completed</p> <p>2.4. Items which do not meet quality requirements are repaired or discarded</p> <p>2.5. Finished work is inspected for compliance against specification or work order, workplace requirements and finish</p>
3. Complete work	<p>3.1. Mat boards are marked for identification and stored following workplace procedures</p> <p>3.2. Scraps and off-cuts are removed for disposal/recycling as required by workplace procedures</p> <p>3.3. Work area is cleaned and rubbish disposed of as appropriate</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4. Workplace documentation is completed as required 3.5. Tools, equipment and unused materials are cleaned, stored and stock levels reported following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use the limited workplace technology related to the cutting of mat boards, including drawing aids, tools, equipment, calculators and measuring devices

Required knowledge

- the type, characteristics, uses and limitations of mat board materials
- workflow in relation to the cutting and storing of mat boards
- the types, characteristics and operation of mat cutting machines
- identification of equipment, processes and procedures
- workplace safety system requirements related to cutting mat boards

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information to set up, operate, adjust and monitor equipment used to cut mat boards
- Identify materials, ensuring quality and aesthetics, to be used in the work process
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - cut single and double ovals and squares
 - cut multiple hole and reverse bevels in each of 2 ply, 4 ply and 8 ply up to 1524 x 1017 mm
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Mat cutting equipment, mat boards, work orders, workplace procedures and appropriate work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant mat board cutting machines/devices, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up, operation, adjustment and monitoring of equipment used to cut basic mat boards • Work may be performed in workplaces which are involved in the construction and/or selection of picture frames, including the provision of customer advice, selection and application of mounting mediums and methods, and in the preservation and presentation of artwork, documents, photographs, etc.
<p>Cut mat boards</p>	<p>Addresses the work involved in the cutting of mat boards by hand or machine according to required shape in straight line or oval with bevel cuts for the mounting of artwork. It does not include CNC cutting of mat boards.</p>
<p>Machines may include, but are not limited to:</p>	<ul style="list-style-type: none"> • straight line mat cutters and circle/oval mat cutters which may be manual • wall-mounted or air-operated
<p>Tools and equipment are to include:</p>	<ul style="list-style-type: none"> • hand-operated tools, including cutting blades, clamps, marking out tools, application equipment • machinery, including mat cutters
<p>Materials include, but are not</p>	<ul style="list-style-type: none"> • mat boards and various forms of artwork. Mat boards may be of paper pulp

RANGE STATEMENT	
limited to:	<ul style="list-style-type: none"> rag/cotton pulp or alpha cellulose pulp board. Finish may be suede plain cotton or metallic
Personal protection equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> Workplace instructions, including job sheets, plans, drawings and designs Workplace procedures relating to OH&S, equipment operations, reporting and communication Equipment manufacturers' specifications and operational procedures

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFPF2006B Cut and handle glazing materials for framing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to cut and handle glazing materials for picture and mirror frames. It includes sheet acrylic.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirement	<p>1.1. Work requirements, including materials, types of cuts and quantities required are identified from work instructions or job order in accordance with workplace procedures</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.3. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.4. Cutting list and quality standards are determined and procedures identified in accordance with workplace requirements</p> <p>1.5. Glazing material to be cut is selected using information from the work order, including type, thickness, colour and dimensions</p> <p>1.6. Machines, equipment and settings required to perform the work are identified</p>
2. Prepare for work	<p>2.1. Sequence of work is planned to ensure cutting is conducted in a logical order</p> <p>2.2. Suitable cutting and lubrication methods are selected</p> <p>2.3. Cutting table is selected and work surface is cleared of debris and dust</p> <p>2.4. Work area is cleared of obstructions and potential hazards</p> <p>2.5. Glazing material is checked for imperfections and damage prior to handling</p> <p>2.6. Glazing material to be processed is located in the work area using correct manual handling procedures and any specialised handling techniques and precautions, observing any labelling instructions</p> <p>2.7. Glazing material is measured accurately to minimise waste and within specified tolerances according to workplace standards</p> <p>2.8. Components and controls of machines, including emergency stops and guards are identified and tested for working order</p>
3. Cut glazing materials	<p>3.1. Tools and equipment are operated and monitored in accordance with manufacturers' instructions and workplace procedures to ensure correct product</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>quality and output</p> <p>3.2. Glazing material is processed to required standard in accordance with job order, work instructions and procedures, including the performance of routine lubrication and adjustments of machines/equipment</p> <p>3.3. Problems occurring during work operations are identified and reported to appropriate persons</p> <p>3.4. Authorised changes in working procedures are followed</p>
4. Complete work	<p>4.1. Completed product is inspected for quality of work and repaired, reprocessed or discarded in accordance with workplace procedures</p> <p>4.2. Cut glazing material is labelled and stored following workplace procedures</p> <p>4.3. Scraps and off-cuts are removed for disposal/recycling as required</p> <p>4.4. Work area is cleaned and rubbish disposed of as appropriate</p> <p>4.5. Workplace documentation is completed as required</p> <p>4.6. Tools, equipment and unused materials are removed and stored appropriately</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, estimate glazing material requirements and minimise waste
- use pre-checking and inspection techniques to anticipate processing problems, avoid re-working and wastage
- use the limited workplace technology related to the handling and cutting of glazing materials, including handling aids, tools, equipment, calculators and measuring devices

Required knowledge

- the qualities and characteristics of glazing materials, including the hazards and handling requirements
- identification of glazing material cutting equipment, functions and procedures
- the set up and operation of glazing material cutting equipment, including procedures for reporting product defects or equipment faults
- workplace safety system requirements related to the cutting of glazing materials
- workflow in relation to the cutting of glazing materials

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work orders and plan cutting operations
- Identify the materials, patterns/plans, processes, machines, equipment and settings to cut glazing materials
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Set up for and prepare to cut glazing materials
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - cut 3 pieces of glass to within .05 mm tolerance
 - cut 3 pieces of acrylic to within .05 mm tolerance
 - cut 2 pieces of oval glass to within 1.5 mm tolerance
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Glazing material, cutting equipment, table, work area, work orders, standard work procedures and appropriate safety and personal protection equipment.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which together form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant glazing material cutting

EVIDENCE GUIDE

equipment, materials, work instructions and deadlines.
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Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit addresses the work involved in cutting and handling glazing materials used in picture framing
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, material safety management systems and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the planning, preparation and cutting and handling glazing materials
Glazing materials include, but are not limited to:	<ul style="list-style-type: none"> • plain sheet glass • speciality glass • non-glare glass • UV clear glass • UV non-glare glass • sheet acrylic • conservation acrylic • mirrors
Tools and equipment are to include:	<ul style="list-style-type: none"> • flat felt-covered cutting tables • tungsten wheel glass cutters • wall-mounted glass cutters • saws • scoring tools • speed cutters • T-squares or L-squares • tape measures • marking pens or chinagraph pencils • templates and lubricants

RANGE STATEMENT	
Personal protection equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices. It could include:</p> <ul style="list-style-type: none"> • gloves • safety glasses and footwear • aprons and overalls
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment required for the handling and cutting of glazing materials • Workplace instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials • Quality standards and procedures

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF2007B Assemble artwork package (basic)

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to identify, gather and assemble all picture frame components required to complete the basic framing of artwork.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for assembly	1.1. Packages to be assembled are identified from work orders/instructions/customer requirements 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Safe and suitable work areas are selected to assemble package 1.4. Specifications of artwork to be framed are identified, including any special requirements 1.5. Components, fittings and attachments required for the package, and their source, are identified 1.6. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety 1.7. Work sequence is planned to suit the job
2. Assemble package	2.1. Components of the package are inspected for flaws/faults and, if located, repaired or returned in accordance with industry standards and workplace procedures 2.2. Components are cleaned and laid out for assembly in accordance with workplace procedures 2.3. Artwork is attached to backing material using the selected method 2.4. Frame components are assembled, adjusted as required to fit and fixed 2.5. Frame is fitted over package and the backing is fixed in accordance with workplace procedures 2.6. Fittings, attachments and hanging aids are attached in accordance with workplace procedures 2.7. Package is inspected for quality and either labelled and stored or returned for reassembly in accordance with workplace procedures
3. Complete work	3.1. Work area is cleaned and rubbish disposed of as appropriate 3.2. Workplace documentation is completed as required 3.3. Tools, equipment and unused materials are cleaned and stored following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid re-working and damage
- use the limited workplace technology related to the assembly of simple artwork packages

Required knowledge

- workflow in relation to assembly of artwork package
- identification of materials, components, equipment, processes and procedures appropriate for assembling artwork packages
- construction techniques and processes for the components of the artwork packages
- industry standards and workplace practices in the assembly of simple artwork packages
- be aware of the effect of this process on the artwork

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Interpret work order and identify the artwork to be framed and the required package components • Complete package assembly without damage to the object • Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment • Follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> • minimise the risk of injury to self and others • prevent damage to goods, equipment and products • maintain required production output and product quality • As a minimum, assemble three artwork packages given a range of components and specifications • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
<p>Resource implications</p>	<p>Components of artwork package, work instructions, work procedures, work area, tools and materials.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which together form a part of the job role.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- Identify artwork to be framed; gather and clean the package components; assemble them; fix fittings and attachments, form a framed artwork package
- At the basic level, artwork is simple, 2D, flat artwork requiring a simple single frame
- Artwork package may consist of, but not be limited to: artwork, mount, mat board, frame, glass, backing, fittings and attachments (including hanging attachments)

Unit context

- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the assembly of simple artwork packages
- OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- Work may be performed in workplaces which are involved in the framing of a wide range of items, including, but not limited to: original artwork, reproductions, photographs and documents

Tools and equipment are to include:

- staple guns
- screwdrivers
- air blower
- staple lifter

Materials to be used may include but are not limited to:

- timber
- metal/alloys
- paper
- cardboard

RANGE STATEMENT	
	<ul style="list-style-type: none"> • laminates • composites • adhesives • cleaning agents • nails • tacks and tapes
Personal protection equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Customer requirements • Workplace procedures relating to OHS, equipment operations, reporting and communication • Work instructions, including job sheets, plans, drawings and designs

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF2008B Recognise and repair finishes of framing materials

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to recognise finishes and effect repairs to damaged framing materials.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. The composition and finish of damaged framing materials is identified and viability/feasibility of effecting repair determined</p> <p>1.2. Repairs to be effected are identified from work/job instructions or as a result of inspection of framing materials</p> <p>1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.4. Repair requirements and procedures are identified from drawings/specifications and workplace procedures</p> <p>1.5. Work sequence is planned to suit the job</p> <p>1.6. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety</p>
2. Repair framing materials	<p>2.1. Fillers and abrasive agents are used to remove/fill holes and other blemishes in materials</p> <p>2.2. Other defects are repaired in accordance with workplace procedures</p> <p>2.3. Colours are matched to suit existing finish of materials</p> <p>2.4. Finishes are applied to materials in accordance with workplace procedures</p> <p>2.5. Problems occurring during repairs are identified and reported to appropriate persons</p> <p>2.6. Repaired material is inspected to ensure best possible match to existing finish and either stored, returned for further repair or scrapped in accordance with workplace procedures</p>
3. Complete work	<p>3.1. Work area is cleaned and rubbish disposed of as appropriate</p> <p>3.2. Workplace documentation is completed as required</p> <p>3.3. Tools, equipment and unused materials are cleaned and stored following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use the limited workplace technology related to the repair of framing material finishes, including tools, equipment, calculators and measuring devices

Required knowledge

- the type, characteristics, uses and limitations of framing materials
- the nature of defects in the finish of framing materials and their method of repair
- the types, uses and operation of tools and equipment
- finishes to framing materials and colour matching
- workplace safety system requirements related to repairing finishes to framing materials
- workflow in relation to repair of framing material finishes

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Identify finishes
- Identify repairs required
- Identify materials, ensuring quality and aesthetics, to be used in the repair process
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, identify the finish and effect the repair of five different damaged items of picture framing materials
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Framing materials requiring repair, tools and equipment for repair, consumables for filling and finishing, work practices and an appropriate work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant frame moulding cutting machines/devices, framing materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the repair of framing materials • Work may be performed in workplaces which are involved in the framing of a wide range of items, including, but not limited to: original artwork, reproductions, photographs, documents and three-dimensional items
Framing materials include:	<ul style="list-style-type: none"> • picture frame mouldings • mat boards • perspex • glass • mirrors
Mouldings are to include but are not limited to:	<ul style="list-style-type: none"> • solid timber • composites • metal and alloy extrusions • and synthetics
Defects in framing materials may include, but not be limited to:	<ul style="list-style-type: none"> • nail/pin holes • splits and cracks • worn finishes and dents/bruises <p>Defects may occur in mouldings or existing frames.</p>
Finishes may include, but not be limited to:	<ul style="list-style-type: none"> • painted surfaces • schalag metal • gesso

RANGE STATEMENT	
	<ul style="list-style-type: none"> • gold leaf gilding • shellac and stained finish
Repair processes may include, but not limited to:	<ul style="list-style-type: none"> • filling • rectification of dents and bruises • replacement of damaged components and touch-up colour/finish <p>Repairs may be effected in new materials or existing frames.</p>
Tools and equipment are to include:	<ul style="list-style-type: none"> • hammers • planes • chisels • filler blades • brushes and clamps <p>Tools and equipment may include sanders.</p>
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • boots • safety glasses/goggles • ear protection and dust mask/respirator
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF3001B Deframe artwork

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to dismantle and remove the frame from artwork, including its documentation. Artwork includes any object that can be framed, including memorabilia.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to identify: <ul style="list-style-type: none"> 1.1.1. reasons for de-framing the item 1.1.2. parts of the framed item or the original framing materials to be retained 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Frame is examined to identify: <ul style="list-style-type: none"> 1.3.1. its composition, condition and type of construction 1.3.2. production techniques 1.3.3. type of and the fixing and fasteners used 1.3.4. de-framing and restoration procedures 1.4. Tools and equipment are selected to match construction and fastener type and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety 1.5. Safe and suitable work area is selected/prepared to de-frame, sort and protect the items 1.6. Dismantling sequence and handling techniques are determined
2. De-frame artwork	2.1. Original frame assembly is dismantled to the extent required in the work instructions using appropriate tools and procedures 2.2. Labels, fasteners and attachments are removed and stored 2.3. Components are separated, protected, tagged and stored following workplace procedures 2.4. Condition of de-framed object is examined and noted for the work order 2.5. Relevant historical information is collated and filed
3. Clean work area and complete operations	3.1. Equipment is cleaned, inspected for serviceable condition and stored appropriately 3.2. Equipment faults are identified, tagged and reported to appropriate personnel 3.3. Work area is cleaned and rubbish disposed of as appropriate 3.4. Workplace documentation is completed as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use the limited workplace technology related to the de-framing of artwork, including drawing aids, tools, equipment, calculators and measuring devices

Required knowledge

- workflow in relation to dismantling frames
- artwork conservation techniques
- identification of materials, equipment, processes and procedures appropriate for de-framing artwork
- frame construction techniques and processes for constructing frame packages
- the types, uses and operation of tools used to de-frame artwork
- workplace safety system requirements related to de-framing artwork
- understand the effect of this process on the artwork

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipments, products and materials, including use of personal protective equipment, safety and environmental protection equipment.
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, de-frame and document five items of 2 and/or 3 dimensional framed artwork of various media and era
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Artwork for dismantling, work instructions, tools, equipment, standard operating procedures and work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant dismantling equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the de-framing of framed objects • OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work may be performed in workplaces which are involved in the de-framing, repair, restoration and framing of a wide range of items, including, but not limited to: original artwork, reproductions, photographs, documents and three-dimensional items
De-frame artwork	<ul style="list-style-type: none"> • Addresses the work required to remove the frame from artwork • Artwork includes all items which may be framed, including three-dimensional objects, textiles, photographs, paper-based artwork and canvas artwork, for the purposes of repair, restoration or reframing
Mounting methods may include:	<ul style="list-style-type: none"> • hinging • lacing and direct mounting
Frame constructions may include but are not limited to:	<ul style="list-style-type: none"> • timber • metal/alloys extrusion • composite construction and other frame material • paper • cardboard • fabric • mat board • backing material and glass

RANGE STATEMENT	
Documentation	As frame is dissembled, relevant materials and their positioning are clearly recorded for reference.
Tools and equipment are to include:	<ul style="list-style-type: none"> • hand-operated tools • including cutting blades • screwdrivers • pincers • pliers and marking out tools
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • timber • metal/alloys • paper • cardboard • laminates • composites • adhesives and artwork
Personal protection equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices.
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Equipment manufacturer specifications and operational procedures • Workplace procedures relating to OHS, equipment operations, reporting and communication • Work instructions, including job sheets, plans, drawings and designs

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF3002B Decorate mat boards

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to decorate mat boards by hand.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Required work is identified from work order/instructions 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Tools and equipment are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety 1.4. Appropriate mat cutting machines are selected for specialty decorative cutting 1.5. Decorative inks, paints and application equipment are selected to match work order 1.6. Safe and suitable work area is selected/prepared 1.7. Board material is selected and laid out to meet work requirements and minimise waste
2. Decorate mat boards	2.1. Mat board is decorated following the requirements of the work order and to maximise the presentation of the artwork 2.2. Decoration is checked against specification or work order 2.3. Decorated boards are marked for identification and stored following workplace procedures
3. Complete work	3.1. Unused materials are stored or recycled as required 3.2. Tools and equipment are cleaned and stored following workplace procedures 3.3. Work area is cleaned and rubbish disposed of as appropriate 3.4. Workplace documentation is completed as required 3.5. Stock level of materials are reported or maintained following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use the limited workplace technology related to the decorating of mat boards, including drawing aids, tools, equipment, calculators and measuring devices

Required knowledge

- the types, characteristics and applications of cutting machines and mat board decorating techniques
- operation of mat cutters, lettering and line drawing guides and colouring application
- identification of equipment, processes and procedures
- workflow in relation to the decoration and storing of mat boards
- workplace safety system requirements related to decorating mat boards

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Identify materials, ensuring quality and aesthetics, to be used in the work process
- Develop mat decorations, including colour and design
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Demonstrate the following on any size mat boards:
 - cut V groove
 - cut mat with decorative corners
 - apply wash panels/lines
 - apply decorative transfers
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Mat cutting equipment, inks, paints and application equipment, mat boards, work orders, standard operating procedures and work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

EVIDENCE GUIDE	
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant cutting and decorating equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the hand decoration of mat boards • OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work may be performed in workplaces which are involved in the construction and/or selection of picture frames, including the provision of customer advice, selection and application of mounting mediums and methods, and in the preservation and presentation of artwork, documents, photographs etc
<p>Mat board decoration</p>	<ul style="list-style-type: none"> • Mat board decoration is the hand decoration of mat boards using decorative methods that may include specialty cutting, line inking, colour washing and marble papers
<p>Tools and equipment are to include:</p>	<ul style="list-style-type: none"> • hand-operated tools, including cutting blades, hand cutters, marking out tools, application equipment (pens and brushes) • machinery, including mat cutters
<p>Materials to be used may include but are not limited to:</p>	<ul style="list-style-type: none"> • mat board • inks • paints and paper
<p>Personal protection equipment</p>	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices</p>
<p>Information and procedures</p>	<ul style="list-style-type: none"> • Workplace procedures relating to the use and

RANGE STATEMENT

	<p>operation of tools and equipment</p> <ul style="list-style-type: none"> • Manufacturer instructions for the use of equipment and materials • Workplace procedures relating to OHS, equipment operations, reporting and communication • Work instructions, including job sheets, plans, drawings and designs
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Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF3003B Set up and operate CNC machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up and operate CNC machines to produce components for picture frames.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements, including; design, quality, materials, equipment and quantities 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Determine appropriate CNC program and settings 1.4. Material for machining is selected and inspected for appropriate quality 1.5. Machines, cutting tools and jigs are checked for safe and effective operation 1.6. Procedures are determined for minimising waste material and for maximising energy efficiency while completing the job 1.7. Safety equipment, including emergency stops, gauges, guards and controls are checked 1.8. Personal protective equipment is selected and used according to OHS procedures
2. Set up machines	2.1. CNC program is set to job requirements 2.2. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturers' instructions 2.3. Trial runs are conducted to check machine operation and quality of finished work 2.4. Final adjustments are made to CNC programs and equipment according to workplace procedures
3. Operate machine	3.1. Machines are operated and monitored to ensure product quality and output 3.2. Waste quantities are checked and minimised 3.3. Problems with the required work are identified and reported to appropriate persons 3.4. Any authorised changes in working procedures are followed 3.5. Daily routine lubrication and adjustments for the equipment are completed
4. Complete work and maintain equipment	4.1. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures 4.2. Material that can be reused is collected and stored

ELEMENT	PERFORMANCE CRITERIA
	<p>4.3. Waste and scrap are removed following workplace procedures</p> <p>4.4. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures</p> <p>4.5. Unserviceable equipment is tagged and faults identified in accordance with workplace</p> <p>4.6. Equipment and tooling are maintained in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use the workplace technology related to the operation of CNC machines, including programs, development of computer applications within the industry and precision measuring devices

Required knowledge

- workflow in relation to the operation of CNC machines
- identification of machines, processes and procedures
- procedures for reporting materials, product or equipment faults
- characteristics of materials used and uses of products produced
- workplace safety system requirements related to the operation of CNC machines

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Identify and operate CNC machine, including the use of safety cut outs and guards
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Interpret work order and locate and apply relevant information to set up, operate, adjust and monitor equipment used to produce components for picture frames.
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, in flat, traditional and reverse profiles (all 3), set up and demonstrate the operation of EITHER:
 - CNC mat board cutter in cutting the following patterns:
 - single and double
 - regular, oval, custom/regular
 - multi-holed; AND/OR
 - CNC mitre saws and CNC V-nailers to cut and join the following frames (at least one of them being a multi-angle frame) up to a width of 100 mm
 - synthetic
 - timber
 - aluminium
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

CNC machines, standard operating procedures, unprocessed materials and appropriate work area.

EVIDENCE GUIDE	
Method of assessment	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.</p>
Context of assessment	<p>Assessment may occur on the job or in a workplace simulated facility with relevant CNC equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<p>This unit covers work involved in the set up, operation, adjustment and monitoring of computer numerical controlled (CNC) machines used in the production of picture frame components such as mat boards and frame mouldings and the joining of frames.</p>
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines • Work may be performed in workplaces which are involved in the framing of a wide range of items, including, but not limited to: original artwork, reproductions, photographs, documents and three-dimensional items
CNC machines	<p>CNC machines used in the manufacture of picture frame components include, but are not limited to:</p> <ul style="list-style-type: none"> • CNC mat cutting machines • CNC mitre saws and CNC V-nailers
Material to be machined may include but is not limited to:	<ul style="list-style-type: none"> • mat boards • solid timber • composites • metal and alloy extrusion and synthetics
Personal protection equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and</p>

RANGE STATEMENT	
	enterprise policies and practices.
Information and procedures	<ul style="list-style-type: none"> • Machine and tooling manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, cutting lists, programs, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF3004B Prepare textiles for framing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to prepare and mount textiles for framing. It includes lacing, couching, blocking, stretching and straining of textiles and stitching to backing of textiles.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Type of fabric used in textile is identified and work requirements established</p> <p>1.2. Quality assurance requirements are identified and observed throughout the process in accordance with industry standards and workplace practice</p> <p>1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.4. Textile is analysed to ensure its compatibility with the mounting process, including the type of mounting and the composition of the substrate material</p> <p>1.5. Work requirements are confirmed from drawing/specifications/instructions and workplace procedures to ensure they are within workplace capability</p> <p>1.6. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety</p>
2. Lace textiles	<p>2.1. Textile is laced into position on compatible backing according to industry practice and workplace procedures to be free of creases and overstretching marks and showing correct proportioning of images</p> <p>2.2. Laced textile is inspected for quality and either stored or, if faulty, is reprocessed in accordance with work procedures</p>
3. Couch textiles	<p>3.1. Textile is couched into position on compatible backing/mounting fabric according to industry practice and workplace procedures to be free of creases and overstretching marks and showing correct proportioning of images</p> <p>3.2. Couched textile is inspected for quality and either stored or reprocessed in accordance with work procedures</p>
4. Stretch/strain textiles	<p>4.1. Stretching or straining frame selected appropriate for material being prepared</p> <p>4.2. Textile is stretched/strained into position according to industry practice and workplace procedures to be free of creases and overstretching marks and showing correct proportioning of images</p> <p>4.3. Stretched/strained textile is inspected for quality and</p>

ELEMENT	PERFORMANCE CRITERIA
	either stored or reprocessed in accordance with work procedures
5. Stitch textiles	<p>5.1. Textile is stitched into specified position onto compatible backing/mounting board according to workplace procedures</p> <p>5.2. Stitched textile is padded if required in accordance with workplace procedures</p> <p>5.3. Stitched textile is inspected for quality and either stored or reprocessed in accordance with work procedures</p>
6. Block textiles	<p>6.1. Blocking process is identified according to type, composition and condition of textile according to workplace procedures</p> <p>6.2. Blocking process is used to return textile back into required position prior to lacing, couching or stretching/straining</p> <p>6.3. Textile is inspected for quality and either stored or reprocessed in accordance with work procedures</p>
7. Complete work	<p>7.1. Defective work is reported in accordance with workplace procedures</p> <p>7.2. Scraps and off-cuts are removed for disposal/recycling as required by workplace procedures</p> <p>7.3. Equipment and work area are cleaned in accordance with workplace procedures</p> <p>7.4. Workplace documentation is completed as required</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate mounting problems, avoid re-working and wastage
- use the limited workplace technology related to preparing textiles for framing, including tools, equipment and emerging processes

Required knowledge

- the type, characteristics, uses and limitations of the various methods of preparing textiles for framing
- the techniques, method, equipment and materials used to prepare textiles for framing
- quality and aesthetic requirements in preparing textiles for framing
- workplace safety system requirements related to preparing textiles for framing
- workflow in relation to preparing textiles for framing
- understand the effect of this process on the artwork

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information to set up, operate, adjust and monitor equipment used to prepare textiles for framing
- Identify materials, ensuring quality and aesthetics, to be used in the work process
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, using the five preparation techniques, prepare representative items from each of the following textiles for framing:
 - canvas works, including paintings and tapestries
 - needle art, including cross stitch, applique, long stitch and embroidery,
 - items of clothing
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate textile mounting equipment for the technique being assessed, textiles for framing, consumables. standard operating procedures and work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of

EVIDENCE GUIDE	
	competency which form a part of the job role.
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant textile preparation equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in preparing textiles for framing
Textiles include, but are not limited to:	<ul style="list-style-type: none"> • painted canvas • weavings • tapestries • cross stitch • applique • silk work and clothing items
Types of fabric include:	<ul style="list-style-type: none"> • cotton • wool • nylon and silk
Tools and equipment must include:	<ul style="list-style-type: none"> • needle • stretching pliers • measuring tape and stapler
Materials may include:	<ul style="list-style-type: none"> • timber • compatible substrates • thread • foam core and composites
Personal protection equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Manufacturer instructions for the use of

RANGE STATEMENT

	equipment and materials <ul style="list-style-type: none"> • Workplace procedures relating to OHS, reporting and communications • Work instructions, including job sheets, plans, drawings and designs
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Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF3005B Recognise and handle artwork for framing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to recognise and handle various types of artwork and frame design to determine appropriate conservation and framing techniques to ensure its artistic/historic significance is maintained/enhanced. It includes storage requirements.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Recognise artwork	<p>1.1. Customer requirements relating to the artwork are determined</p> <p>1.2. Work area is cleaned and prepared to handle artwork in accordance with workplace standards</p> <p>1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.4. Workplace quality assurance requirements are recognised and adhered to throughout the work</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety</p> <p>1.6. Artwork is handled in accordance with industry recognised handling methods and workplace procedures</p> <p>1.7. Artwork is examined to identify:</p> <ul style="list-style-type: none"> 1.7.1. period of artwork 1.7.2. its composition 1.7.3. any historic, monetary or sentimental value <p>1.8. Category of artwork is recognised to inform the selection of appropriate framing techniques</p>
2. Identify restoration/conservation requirements	<p>2.1. Customer requirements relating to the artwork are confirmed</p> <p>2.2. Artwork is examined to identify:</p> <ul style="list-style-type: none"> 2.2.1. quality, value and appropriate handling techniques/requirements 2.2.2. its composition and production techniques 2.2.3. any restoration/conservation required 2.2.4. compatibility of mounting processes, including type of mounting and composition of substrate material <p>2.3. Method of restoration/conservation, including techniques and materials, is identified, including the need for any specialised expertise</p> <p>2.4. Artwork for restoration/conservation is stored to prevent loss or damage in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to the history and techniques of art and framing artwork, restoration/preservation techniques and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use the workplace technology related to the recognition of artwork and its restoration/conservation

Required knowledge

- major categories of art media
- liabilities and obligations relating to framing artwork
- framing materials and techniques
- materials used in artworks
- chemical reactions between artworks and framing materials
- restoration/conservation techniques for artwork and frames
- operation requirements of equipment and work systems in work area
- understand the effect of this process on the artwork

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Recognise the basic categories of art and the medium used in their production
- Recognise frames and the medium used in their production
- Identify defects in artwork and frames and determine appropriate restoration/conservation techniques
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, from five items of artwork representing various media and era, recognise:
 - era
 - artwork medium and material
 - any historical/monetary/sentimental significance
 - handling and storage requirements
 - impact on techniques
 - materials to be used for framing
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Historical information, workplace procedures, work area and artwork for conservation framing.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be

EVIDENCE GUIDE	
	in conjunction with assessment of other units of competency which form a part of the job role.
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant framed artwork, equipment, simulated work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the recognition and handling of artwork, and in identifying restoration/conservation techniques • OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work may be performed in workplaces which are involved in the framing of artwork and documents of sufficient value to require the application of conservation framing techniques
<p>Recognise artwork</p>	<ul style="list-style-type: none"> • the identification of all forms of artwork in order to determine appropriate presentation and/or restoration/conservation techniques
<p>Artwork may include, but is not limited to:</p>	<ul style="list-style-type: none"> • original works of art (oil and watercolour) • original prints • reproductions • needlework • textiles • photographs • certificates and memorabilia (including 3D objects)
<p>Damage to artwork may be caused by but is not limited to:</p>	<ul style="list-style-type: none"> • light • temperature • humidity • physical damage • insects • pollution

RANGE STATEMENT	
Personal protection equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Customer requirements (sentimental value) • Historical and/or monetary value • Legal implications • Industry conservation standards and requirements • Work instructions, including job sheets, plans, drawings and designs • Literature relating to the history and conservation of artwork • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF3006B Prepare design requirements for framing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to apply the elements and principles of design to select the correct framing of artwork to maintain/enhance its historic, sentimental or monetary value.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify design requirements	<p>1.1. Customer requirements relating to the artwork are determined</p> <p>1.2. Work area is cleaned and prepared to handle artwork in accordance with workplace standards</p> <p>1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.4. Workplace quality assurance requirements are recognised and adhered to throughout the work</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety</p> <p>1.6. Artwork is handled in accordance with industry recognised handling methods and workplace procedures</p> <p>1.7. Artwork is assessed for colour qualities to identify:</p> <p>1.7.1. primary, secondary, tertiary, harmonic and contrasting colours by colour wheel</p> <p>1.7.2. aesthetic/mood evoking nature (warmth, lightness, brightness, etc.)</p> <p>1.8. Artwork is assessed against the elements and principles of design and their impact on preservation/restoration and framing selection determined</p>
2. Develop frame design	<p>2.1. Customer requirements for framing are identified</p> <p>2.2. Historical, sentimental or monetary value of artwork ascertained through examination, research and/or consultation with customer</p> <p>2.3. Artwork is assessed to identify any preservation/restoration work required and impact on frame design</p> <p>2.4. Compatibility of framing materials with the artwork is determined from manufacturers' and industry information</p> <p>2.5. Principles of colour design applied to select mat and framing materials to complement artwork</p> <p>2.6. Design package is developed for presentation and discussion with customer</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to the history and techniques of art and framing artwork, restoration/preservation techniques and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use the workplace technology related to the design requirements for framing artwork and the restoration/preservation of objects

Required knowledge

- major categories of art media
- liabilities and obligations relating to framing artwork
- framing materials and techniques
- elements and principles of design
- principles and the qualities/influence of colour
- materials used in artworks
- chemical reactions between artworks and framing materials
- restoration/preservation techniques for artwork and frames
- operation requirements of equipment and work systems in work area
- understand the effect of this process on the artwork

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Recognise the basic categories of art and the medium used in their production
- Recognise frames and the medium used in their production
- Identify the elements and principles of design and apply them to artwork, designing an appropriate framing package
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, prepare the design requirements for the framing of five items of artwork of various media and era
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Historical information, manufacturer information, colour wheel, workplace procedures, work area and artwork requiring framing design.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace

EVIDENCE GUIDE	
	simulated facility with relevant artwork requiring framing, equipment, simulated work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- Work may be performed in workplaces which are involved in the framing of artwork and documents of sufficient value to require the application of framing design
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the recognition and handling of artwork, and in identifying design requirements for framing

Framing design

- Addresses the requirement to consider the elements and principles of design to maintain/enhance the aesthetic and historical significance of artwork
- Elements of design include: line, direction, shape, size, texture, value and colour
- Principles of design include: repetition, alteration, harmony, graduation, contrast (or opposition or conflict), dominance, unity and balance
- Influences on compatibility of frame design include:
 - frame package design to suit required level of preservation
 - framing style to match image quality and aesthetic value
 - mouldings, fittings and attachments to suit framing and hanging requirements

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Consideration of customer requirements must be included in developing design
Artwork may include, but is not limited to:	<ul style="list-style-type: none"> • original works of art • original prints • reproductions • needlework • textiles • photographs • certificates and memorabilia (including 3D objects)
Damage to artwork may be caused by but is not limited to:	<ul style="list-style-type: none"> • light • temperature • humidity • physical damage • insects • pollution
Mounting methods may include:	<ul style="list-style-type: none"> • hinging • supports • lacing • stretching and direct mounting
Frame constructions may include but are not limited to:	<ul style="list-style-type: none"> • timber • metal/alloys extrusion • composite construction and other framing material such as paper/cardboard/fabric mat board • backing materials • acrylic and glass
Tools and equipment are to include:	<ul style="list-style-type: none"> • material samples • measuring tools and layout table
Personal protection equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Customer requirements • Industry preservation standards and requirements, including legal implications • Work instructions, including job sheets, plans, drawings and designs • Literature relating to the history and preservation of artwork

RANGE STATEMENT

	<ul style="list-style-type: none"> Workplace procedures relating to reporting and communication
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Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF3007B Apply frame finishes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to apply surface coatings to picture frames.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work to be completed is identified from work order/instruction 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. The process for obtaining materials/components and moving completed work to the next process is identified 1.4. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the finishing task in terms of quality, serviceability and safety 1.5. Appropriately ventilated area, including fume extraction system (if appropriate), is identified and prepared for use 1.6. Finishing materials are identified and prepared for the finishing task 1.7. Workplace information relating to the safe application of finishes is used to inform work practices 1.8. Processing and application techniques, time and safety requirements are identified and used plan process
2. Prepare for finishing	2.1. Frame surfaces are checked for contamination and correct preparation according to workplace procedures and standards 2.2. Frames with surface or other faults are identified and faults reported or repaired as appropriate 2.3. Techniques for application of materials identified and used according to workplace practices 2.4. Colour match and trial applications of finish are made to check equipment operation, materials consistency and required surface finish 2.5. Faults are identified and workplace procedures for rectification are followed
3. Apply surface finish	3.1. Apply surface finish according to job instructions and workplace procedures 3.2. Surface finish is checked in accordance with workplace requirements 3.3. Rectification of surface faults is made as required

ELEMENT	PERFORMANCE CRITERIA
	3.4. Products are inspected and approved for suitability for further processing 3.5. Defects are dealt with and/or reported in accordance with workplace procedures
4. Complete work	4.1. Tools and equipment are cleaned and inspected for serviceable condition and stored appropriately 4.2. Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed 4.3. Work area is cleaned and returned to approved condition 4.4. Workplace documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate finishing problems, avoid re-working and damage
- use the limited workplace technology related to the finishing of picture frames, including tools, equipment and finishes

Required knowledge

- picture frame finishes
- methods, characteristics and problems of application
- workflow in relation to spraying operations
- identification of equipment, processes and procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Identify frames to be finished, the finish to be applied and the means by which this is to be achieved
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the following to the given timber, timber/compound, plain, ornamental frames:
 - hand staining
 - hand finishing
 - washed finishing
 - mechanical finishing
 - faux finishing
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Finishing equipment, work area, finishes and frames to be finished.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment,

EVIDENCE GUIDE

	materials, work instructions and deadlines.
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the application of finishes to frames • OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work may be performed in workplaces which are involved in the manufacture or repair of picture frames
Apply frame finishes	<ul style="list-style-type: none"> • Addresses the application of finishes to picture frames by mechanical means or by hand • Finishes may be paint, stain, powder, foil, lacquer, synthetic or faux • Picture frames may be of timber, metal/alloy or synthetic material
Tools and equipment are to include:	<ul style="list-style-type: none"> • air spray gun • airless spray gun • air compressor and hoses • paint and brushes • finish containers and scrapers
Tools and equipment may include:	<ul style="list-style-type: none"> • a custom spray booth and fume extraction/ventilation system
Materials may include but is not limited to:	<ul style="list-style-type: none"> • wood fillers • stains • waxes • oils • French polishes • varnish

RANGE STATEMENT	
	<ul style="list-style-type: none"> • paints • liming • cutting compounds • acrylics • enamels • polyurethane • methylated spirits • sand papers • cotton rags • hessian rags • steel wool • sandpaper • abrasive papers • rubbers
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include but is not limited to:</p> <ul style="list-style-type: none"> • safety glasses/goggles • hair nets • ear muffs/plugs • footwear • gloves • respiratory masks • protective clothing
Information and procedures	<ul style="list-style-type: none"> • Manufacturer specifications and operational procedures • Workplace procedures relating to the setting up and applying frame finishes • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF3008B Assemble artwork package (complex)

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to identify, gather and assemble all picture frame components required to complete complex custom framing of artwork.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for assembly	1.1. Packages to be assembled are identified from work orders/instructions/customer requirements 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Safe and suitable work areas are selected to assemble package 1.4. Specifications of artwork to be framed are identified, including any special requirements 1.5. Components, fittings and attachments required for the package, and their source, are identified 1.6. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality, serviceability and safety 1.7. Work sequence is planned to suit the job
2. Assemble package	2.1. Components of the package are selected, inspected for flaws/faults and, if located, repaired or returned in accordance with industry standards and workplace procedures 2.2. Components are cleaned and laid out for assembly in accordance with workplace procedures 2.3. Artwork is mounted using the appropriate method 2.4. Frame components are assembled, adjusted as required to fit and fixed in place 2.5. Frame is fitted over package and the backing is fixed in accordance with workplace procedures 2.6. Fittings, attachments and hanging aids are attached in accordance with workplace procedures 2.7. Package is inspected for quality and either labelled and stored or returned for reassembly in accordance with workplace procedures
3. Complete work	3.1. Work area is cleaned and rubbish disposed of as appropriate 3.2. Workplace documentation is completed as required 3.3. Tools, equipment and unused materials are cleaned and stored following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to the artwork to be framed, work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate assembly problems, avoid re-working and damage
- use the limited workplace technology related to the assembly and preservation of complex artwork packages

Required knowledge

- workflow in relation to assembly of artwork package
- identification of materials, components, equipment, processes and procedures appropriate for assembling artwork packages
- construction techniques and processes for the components of the artwork packages
- industry standards and workplace practices in the assembly of complex artwork packages
- liabilities and obligations relating to framing artwork
- chemical reactions between artworks and framing materials
- preservation techniques for artwork and frames
- understand the effect of this process on the artwork

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and identify the artwork to be framed, the required package components and any special assembly requirements
- Complete assembly of the complex package without damage to the artwork
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to assemble:
 - an item of matted artwork
 - a multi-frame (and/or fillets) item of artwork
 - a memorabilia box frame at least 50 mm deep
 - a full conservation framed artwork
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Components of artwork package, work instructions, work procedures, work area, tools and materials.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which together form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment,

EVIDENCE GUIDE

materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the assembly of complex artwork packages
- OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- Work may be performed in workplaces which are involved in the framing of a wide range of items, including, but not limited to: original artwork, reproductions, photographs, documents and 3D objects

Assemble artwork package (Complex)

- Addresses the requirement to identify artwork to be framed, the gathering and preparing of the package components, their assembly and the fixing of fittings and attachments, forming a framed artwork package
- At this, the complex level, artwork may be 3D, requiring specialised framing, using mat boards, spacers and fillets and requiring preservation. The item could have artistic/historic significance, requiring specialist handling
- Artwork package consists of: artwork, mount, mat board, frame, glass, backing, fittings and attachments (including hanging attachments)

Tools and equipment are to include:

- hand-operated tools, including cutting blades, hammers, screwdrivers, drills, clamps, marking out tools, air stapler, tacker, flexi-point gun
- equipment, including staplers

RANGE STATEMENT	
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • timber • metal/alloys • paper • cardboard • laminates • composites • adhesives • cleaning agents • nails • tacks and tapes
Personal protection equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Customer requirements • Workplace procedures relating to OHS, equipment operations, reporting and communication • Work instructions, including job sheets, plans, drawings and designs • Industry preservation standards and requirements, including legal implications • Literature relating to the history and preservation of artwork

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF3009B Install artwork

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to install framed artwork in domestic or commercial situations.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan installation	1.1. Work to be undertaken is identified from work/job/customer order 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Artwork to be installed is viewed to determine artistic and design characteristics and physical dimensions and shape 1.4. Site for installation is visited and location, wall composition, fittings, attachments, hanging/fixing devices and any display features determined 1.5. If necessary, a plan for installation is developed and necessary regulatory approvals for installation sought 1.6. Customer approval of plan is gained
2. Prepare for installation	2.1. Specifications and/or plans are read and interpreted 2.2. Attachments, fittings, hanging/fixing devices and display features are identified and ordered 2.3. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 2.4. Artwork to be installed is prepared for safe and secure transit to work site 2.5. Sequence of work is planned
3. Install artwork	3.1. Instructions and sequence for installation are followed 3.2. Attachments, fittings, hanging/fixing devices and display features are organised and installed in accordance with relevant industry and workplace requirements 3.3. Artwork is positioned in accordance with work requirement 3.4. Completed installation is checked to ensure it meets required specifications 3.5. Customer approval of installation is gained
4. Complete housekeeping	4.1. Unused materials are stored or recycled as required 4.2. Tools and equipment are cleaned and stored appropriately 4.3. Work area is cleaned and rubbish disposed of

ELEMENT	PERFORMANCE CRITERIA
	<p>appropriately</p> <p>4.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate installation problems, avoid errors, avoid wastage and improve process
- use the limited workplace technology related to the installation of artwork, including appropriate tools, equipment, calculators and measuring devices

Required knowledge

- the elements and principles of design
- the types and features of framed artwork, the composition and characteristics of frames
- the composition, load bearing ability and method of construction of walls and ceilings
- workplace safety system requirements related to the installation of artwork
- workflow in relation to the installation of artwork
- understand the effect of this process on the artwork

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - recognise the requirements to securely fix artwork to be displayed for each installation
 - install an item of artwork of up to 20 kg on brick, plaster sheet and lath and plaster walls
 - install a grouped set of artwork
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Framed artwork, tools and equipment, attachments, fittings, hanging/fixing devices and display features and area suitable for installation.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant artwork installation equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • The installation of framed artwork in the premises of a customer, domestic or commercial. • Artwork may be positioned singly or grouped in conjunction with other pieces of artwork or in an adjustable gallery system
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous substance and dangerous goods codes and local safe operating procedures • Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the installation of artwork
Tools and equipment are to include:	<ul style="list-style-type: none"> • ladders • work platform/trestles • power drill and fittings • hammer • pliers • screwdrivers • caulking gun • square • tape measure • plumb bob and spirit level
Materials are to include but are not limited to:	<ul style="list-style-type: none"> • attachments • fittings • hanging/fixing devices and display features • nails • tacks

RANGE STATEMENT	
	<ul style="list-style-type: none"> • screws • staples • filler • adhesive and tapes
Personal protection equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Customer requirements • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials • Insurance cover

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFPF4001B Design and construct ornamental frames

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to design and construct ornamental frames.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify design requirements	<p>1.1. Customer requirements relating to the display of the artwork and frame features are determined</p> <p>1.2. Work area is cleaned and prepared to handle artwork in accordance with workplace standards</p> <p>1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.4. Workplace quality assurance requirements are recognised and adhered to throughout the work</p> <p>1.5. Artwork is handled in accordance with industry recognised handling methods and workplace procedures</p> <p>1.6. Artwork is assessed for colour qualities to identify:</p> <p>1.6.1. primary, secondary, tertiary, harmonic and contrasting colours by colour wheel</p> <p>1.6.2. aesthetic/mood evoking nature (warmth, lightness, brightness etc)</p> <p>1.7. Artwork is assessed against the elements and principles of design and their impact on preservation/restoration and framing selection determined</p> <p>1.8. A design concept is developed and confirmed with the customer</p>
2. Develop frame design	<p>2.1. Historic, sentimental or monetary value of artwork ascertained through examination, research and/or consultation with customer</p> <p>2.2. Artwork is assessed to identify any impact preservation/restoration will have on frame design</p> <p>2.3. Compatibility of framing materials with the artwork is determined from manufacturer and industry information</p> <p>2.4. Principles of colour design applied to select mat and framing materials to complement artwork</p> <p>2.5. A provisional design package is developed for presentation and discussion with customer</p> <p>2.6. Design package is revised to reflect customer requirements</p>
3. Construct ornamental frame	<p>3.1. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work in terms of quality,</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>serviceability and safety</p> <p>3.2. Machinery is used in accordance with workplace procedures throughout the work, including use of personal protective equipment</p> <p>3.3. Material is cut to size and laid out in the required design</p> <p>3.4. Specialised/ornamental components are moulded/turned/carved/manufactured in accordance with workplace procedures</p> <p>3.5. Frame components are finished in compliance with the design specifications and assessed for fit and aesthetic appearance</p> <p>3.6. Frame is joined to comply with design in accordance with workplace procedures</p> <p>3.7. Finish to the frame and its fittings is applied to comply with design in accordance with workplace procedures</p> <p>3.8. Work is checked against required quality standards with any non-conformity being rectified</p> <p>3.9. Customer endorsement of finished frame is sought and any modifications identified and implemented</p>
4. Complete work	<p>4.1. Scraps and off-cuts are removed for disposal/recycling as required by workplace procedures</p> <p>4.2. Work area is cleaned and rubbish disposed of as appropriate</p> <p>4.3. Workplace documentation is completed as required</p> <p>4.4. Tools, equipment and unused materials are cleaned and stored following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to the history and techniques of art and framing artwork, restoration/preservation techniques and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and avoid wastage
- use the workplace technology related to the design and construction requirements of complex ornamental frames

Required knowledge

- major categories of art media
- liabilities and obligations relating to framing artwork
- framing materials and techniques of frame building
- elements and principles of design and the qualities/influence of colour
- materials used in artworks
- chemical reactions between artworks and framing materials
- restoration/preservation techniques
- operation requirements of equipment and work systems in work area
- understand the effect of this process on the artwork

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Recognise the basic categories of art and the medium used in their production
- Recognise frames and the medium used in their production
- Identify the elements and principles of design and apply them to designing an appropriate complex ornamental frame
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, design and construct a frame incorporating three types of materials, displaying techniques of moulded and carved finishes and including at least one alternate joining technique (such as fingers, biscuits, dowel, etc.)
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Customer/work requirement, design facilities, woodworking and joining tools and equipment, frame assembly and finishing requirements, workplace procedures and work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of

EVIDENCE GUIDE	
	competency which form a part of the job role.
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant artwork requiring framing, equipment, simulated work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the recognition and handling of artwork, and in identifying design requirements for framing
- OHS requirements may include legislation, standards, material safety management systems and local safe operating procedures
- Work is carried out in accordance with statutory requirements, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
- Work may be performed in workplaces which are involved in the framing of artwork of sufficient value to require the application of framing design

Frame design

- Addresses the requirement to consider elements and principles of design to maintain/enhance the historic, sentimental or monetary value of artwork
- Elements of design include:
 - line
 - direction
 - shape
 - size
 - texture
 - value
 - colour
- Principles of design include:
 - repetition
 - alteration
 - harmony
 - graduation
 - contrast (or opposition or conflict)

RANGE STATEMENT	
	<ul style="list-style-type: none"> • dominance • unity and balance • Influences on compatibility of frame design include: <ul style="list-style-type: none"> • frame package design to suit required level of preservation • framing style to match image quality and aesthetic value • mouldings, fittings and attachments to suit framing and hanging requirements
Ornamental frames	<ul style="list-style-type: none"> • Ornamental frames are those required for artwork where its aesthetics and/or value deem it necessary • Artwork may be 2 or 3D, and the frame fitted with ornate/elaborate embellishment
Construction technique includes:	<ul style="list-style-type: none"> • moulding of composite • creating moulds • frame preparation • application of composite to frame and carving/ornamentation/decoration as required
Tools and equipment are to include:	<ul style="list-style-type: none"> • saws (circular, drop, docking and mitre) • chisels • underpinners • screwdrivers • marking out tools • pincers • pliers • touch-up material • glues and finishing tools, including files and sandpaper
Frame constructions may include but are not limited to:	<ul style="list-style-type: none"> • timber • metal/alloys extrusion • synthetic and composite construction
Personal protection equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Customer requirements • Industry preservation standards and requirements, including legal implications • Work instructions, including job sheets, plans,

RANGE STATEMENT

	drawings and designs <ul style="list-style-type: none"> • Literature relating to the history and preservation of artwork • Workplace procedures relating to reporting and communication
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Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPF4002B Determine and apply gilding techniques

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to determine the requirement and to prepare and apply gilding techniques to picture frames. These may be existing frames requiring repair or restoration or new frames.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Work to be completed is identified from work instruction, customer request or artwork is assessed as requiring a gilded frame</p> <p>1.2. Frame requiring gilding is examined to identify whether new gilding, preservation or restoration techniques are required</p> <p>1.3. Gilding technique or techniques to be applied is determined</p> <p>1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the finishing task in terms of quality, serviceability and safety</p> <p>1.6. Gilding materials and any associated finishes required are identified and assembled for the gilding task</p> <p>1.7. Work sequence is planned to suit the job</p>
2. Prepare for gilding	<p>2.1. Frame surfaces are checked for contamination and correct preparation according to workplace procedures and standards</p> <p>2.2. Frames with surface or other faults are identified and faults reported or repaired as appropriate</p> <p>2.3. Techniques for application of materials identified and used according to industry standards and workplace practices</p> <p>2.4. Faults are identified and workplace procedures for rectification are followed</p> <p>2.5. Composition (Compo) work is completed as required to meet specifications in accordance with workplace procedures</p>
3. Apply gilding	<p>3.1. Apply gilding according to job instructions and workplace procedures, which may include:</p> <ul style="list-style-type: none"> 3.1.1. choice of substrate 3.1.2. surface preparation 3.1.3. selection of bole or poliment 3.1.4. selection and application of size 3.1.5. selection and application of leaf 3.1.6. patination of finish

ELEMENT	PERFORMANCE CRITERIA
	<p>3.1.7. sealing of leaf</p> <p>3.2. Final finish is checked in accordance with workplace requirements</p> <p>3.3. Rectification of surface faults are made as required</p> <p>3.4. Ornamentation is applied as required in accordance with job instructions and workplace procedures</p> <p>3.5. Products are inspected and approved for suitability for further processing with defective frames being handled in accordance with workplace procedures</p>
4. Complete work	<p>4.1. Tools and equipment are cleaned and inspected for serviceable condition and stored appropriately</p> <p>4.2. Unused material is returned to store in accordance with workplace procedures</p> <p>4.3. Work area is cleaned and returned to approved condition</p> <p>4.4. Workplace documentation is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate finishing problems, avoid re-working and damage
- use the workplace technology related to the application of gilding techniques to picture frames, including tools, equipment and finishes

Required knowledge

- the techniques and application of gilding
- methods, characteristics and problems of application
- workflow in relation to gilding operations
- identification of equipment, processes and procedures
- understand the effect of this process on the artwork

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Identify gilding to be performed, the technique to be used and the means by which this is to be achieved
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum:
 - determine gilding technique and refurbish an existing gilded frame
 - using differing techniques/materials, prepare and gild two new frames
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Gilding equipment, work area, metallic leaf, other finishing materials and frames to be gild finished.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant gilding equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Apply gilding techniques

- The application of metallic leaf to picture frames. Leaf may be gold, silver, platinum, etc. in varying alloys, shlagmetal (brass) in varying alloys, copper and aluminium
- Techniques may be new work (based on contemporary artwork contained or decorative furnishing needs) or existing frame (either restoration/preservation needs)
- Techniques for application may include:
 - oil
 - size
 - quick size (acrylic)
 - water gilding based on the reactivation of the glue in the bole layer
 - new techniques such as Kolnar gilding

Compo work

Compo work is concerned with the ornamentation of frames for gilding. It may involve:

- its manufacture
- taking of moulds from existing frames
- repair of broken/missing ornamentation

Gilding

Gilding may be accompanied by one or more other finishes. These may include:

- silver gilt
- distemper
- japanning
- bronze
- aluminium and other powders (as in wax and flash gilding)
- use of aniline dyes and pigments and casein and verre eglomise (gilding and black lacquer on glass)

Patination of finishes may be chemical, stained,

RANGE STATEMENT	
	<p>painted, varnished or distemper</p> <p>The maintenance of original finishes on historic pieces may require the removal of overpainting</p>
Frames	<ul style="list-style-type: none"> • Picture frames requiring gilding may be new or old, requiring repair and/or restoration • Gilded picture frames will normally be of timber with compo or carved (rare) ornamentation. Some ornamentation may be moulded (Italian), carton pierre or papier mache
Tools and equipment may include:	<ul style="list-style-type: none"> • gilder's cushion • gilder's knife • gilder's tip • brushes and agate burnishing stones
Materials may include but are not limited to:	<ul style="list-style-type: none"> • size (parchment or rabbit skin) • whiting (chalk) • bole (wet or dry) • ethanol and brandy) • gilding oil • gold leaf • shlagmetal Dutchmetal) • alloy and aluminium leaf • glue • rosin • turpentine • shellac and varnish colours and chemicals for patination such as potassium sulphide
Personal protection equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices. As many of the materials used in gilding are toxic, gloves, eye protection and protective clothing should be worn.</p>
Information and procedures	<ul style="list-style-type: none"> • Manufacturer specifications and operational procedures • Workplace procedures relating to the setting up and applying gilding techniques • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Picture Framing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPT3001A Develop knowledge of piano industry

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to understand the origins of the piano industry and how the different innovations in piano building have impacted on the piano technology sector of the furnishing industry.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to understand the origins of the piano and how changes in design, construction and materials have led to the evolution of the modern piano.</p> <p>The type of work tasks performed in acquiring knowledge of the piano industry will include research, investigation and some computing skills. Participation in teams including group or team coordination may be included and may be conducted in small to large scale enterprises.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Describe historical development of keyboards to modern pianos	1.1. Original keyboard instruments are identified. 1.2. Evolutionary development of upright pianos is investigated. 1.3. Materials selected for use in pianos are investigated, with reasons for changes occurring examined.
2. Identify changes in design of pianos	2.1. Changes to design of pianos are investigated and explained. 2.2. Difference in playing mechanisms is explained.
3. Identify types of pianos	3.1. Modern piano types are identified. 3.2. Differences between pianos are investigated.
4. Identify basic piano components	4.1. Construction of piano infrastructure is identified. 4.2. Major systems are identified, with all parts and functions listed.
5. Describe role of Piano Technician	5.1. Role of technician is identified. 5.2. Changes to role identified.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- types, characteristics, uses, limitations and preparation of materials and equipment used in piano tuning and repair
- origin and types of pianos
- piano infrastructure including systems
- terms used to describe piano components and systems
- role of piano technicians
- established lines of communication and protocols

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the piano tuning and repair industry
- read and understand documentation
- work collaboratively with others to complete tasks in a timely manner
- identify and select practical solutions to problems using analytical skills
- show independence and initiative in making decisions
- collect and organize information for the purpose of:
 - planning tasks
 - planning use of resources
 - assessing and prioritizing tasks
 - managing time and resources
- manage own work performance to:
 - follow OHS and workplace practices
 - plan and organize work schedules and routines
 - maintain required production output
 - assess quality of own work
- locate, interpret and apply information on piano technology
- use workplace technology related to piano technology, including specified tools, equipment, calculators and measuring devices for piano tuning and repair

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Locate, interpret and apply information relevant to piano tuning and repair industry • Identify different pianos and their construction • Role of piano technician is identified and understood • Communicate and work with others in the work area • Apply safe handling practices and safe operating procedures for equipment, products and materials to: <ul style="list-style-type: none"> • minimise the risk of injury to self or others • prevent damage to goods, equipment and products
<p>Context of and specific resources for assessment</p>	<p>Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements</p> <p>Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.</p> <p>The following resources should be made available:</p> <ul style="list-style-type: none"> • upright and grand pianos • workplace location or simulated workplace
<p>Method of assessment</p>	<p>Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:</p> <ul style="list-style-type: none"> • organising work • completing tasks according to instructions • working systematically with attention to detail • identifying improvements and avoiding damage • using workplace practices • using OHS practices • assessing operational readiness of tools and equipment • recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions <p>Assessment must include a variety of project or work activities that allow the candidate to demonstrate</p>

EVIDENCE GUIDE

	<p>knowledge of the piano industry</p> <p>Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>
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Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
Original keyboard instruments may include	<ul style="list-style-type: none"> • zither • clavichord • harpsichord • forte piano • piano
Periods may include	<ul style="list-style-type: none"> • antique (1700-1850) • Victorian (1850-1900) • modern (1900-2000) • current (2000 onwards)
Types of pianos may include	<ul style="list-style-type: none"> • vertical <ul style="list-style-type: none"> • upright • spinet • console • player • grand <ul style="list-style-type: none"> • baby (4'6"-6') • professional (6'-7'6") • concert (7'6"-9'+) • square
Piano infrastructure may include	<ul style="list-style-type: none"> • the case • timing pins • soundboard and bridges • strings • pinblock and tuning pins • keys and actions
Systems may include	<ul style="list-style-type: none"> • actions • soundboard/bridges • strings

RANGE STATEMENT	
	<ul style="list-style-type: none"> • structural
Role of technicians may include	<ul style="list-style-type: none"> • quotations • tuning • repairs • rebuilding • restoration • polishing • piano moving • selling • advice on purchases
Changes to technician's role may include	<ul style="list-style-type: none"> • restriction to tuning or repairs only • less or more restoration • less or more major repairs • increased use of technology in tuning process

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPT3002A Select materials for piano repair and manufacture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to select materials used in the manufacture and repair of pianos.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to select appropriate materials used in manufacture, repair or rebuilding of upright, grand and player pianos. These materials include timber, metal, plastics, synthetic fasteners, adhesives, surface coatings and hardware. This unit applies in a workplace and on-site environment and may be conducted in a small to large scale enterprise.</p> <p>Applications may include some complex or non routine activities involving individual responsibility or autonomy and/or collaboration with others through members of groups or teams.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine materials requirements	<p>1.1. Types of materials may include <i>timber, metal, felt, synthetics</i> and <i>other materials</i> used in the construction and repair of pianos.</p> <p>1.2. <i>Characteristics of timber</i>, metal and synthetic materials used in piano construction are analysed according to <i>structural</i> and <i>aesthetic requirements</i> according to workplace documentation.</p> <p>1.3. Client requirements and desires are reviewed, confirmed and clarified</p>
2. Select and use fasteners	<p>2.1. Work instructions are used to determine job requirements for fasteners, including design, colour, finish process and quality</p> <p>2.2. <i>Fasteners</i> are applied according to workplace requirements.</p> <p>2.3. Work site is set up according to the task, including preparation of required material and selection of holding and supporting equipment.</p> <p>2.4. Work is placed and held or supported in position for fastener application.</p> <p>2.5. Tools are selected and used to attach fasteners, according to their safety and effecting intended purposes.</p> <p>2.6. Personal protective equipment is selected, correctly fitted and used.</p>
3. Select and use adhesives	<p>3.1. <i>Adhesives</i> are selected according to workplace requirement</p> <p>3.2. <i>Work site</i> is set up according to the task, including preparation of required materials and selection of <i>holding and supporting equipment</i></p> <p>3.3. Work is placed and held or supported in position for adhesive application</p> <p>3.4. <i>Personal protective equipment</i> is selected, correctly fitted and used</p> <p>3.5. <i>OHS requirements</i> that apply to the safe application of adhesives are identified and followed.</p> <p>3.6. Adhesives are applied using <i>clamping techniques</i>, as required.</p>
4. Identify surface coatings and finishes for pianos	<p>4.1. <i>Surface coatings</i> - used for both interior and exterior finishing on piano components are identified, with preparation, application and durability</p>

ELEMENT	PERFORMANCE CRITERIA
	4.2. Furniture <i>finishes</i> used are investigated for requirements
5. Identify hardware	5.1. Work requirements are used to determine <i>hardware</i> needs for piano construction and repair
6. Clean up work area	6.1. All tools, materials and other equipment are checked, cleaned and returned to their appropriate location 6.2. Work area is cleared and waste removed 6.3. <i>Workplace documentation</i> is completed and filed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate with supervisor and customer to:
 - confirm work orders and instructions
 - identify problems
 - report outcomes of selecting and applying hardware and fixings
- work with others and in a team to select and apply hardware and fixings
- use pre-checking and inspection techniques to anticipate production problems, avoid reworking and wastage
- participate in establishing new ideas and work specifications for selecting and applying hardware and fixings
- plan and organise activities to avoid any backtracking, work flow interruptions, rework or wastage, including preparation and layout of the worksite and selection of tools, equipment and materials
- manage own work performance to:
 - follow OHS and workplace practices
 - plan and organise work schedules and routines
 - maintain required production output
 - assess quality of own work
- adapt to new skill requirements
- research and apply new ideas and techniques
- use workplace technology related to selecting and applying hardware and fixings including specified tools, equipment, calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for selecting and applying hardware and fixings
- organisational and site standards, requirements, policies and procedures for applying hardware and fixings
- reading and interpreting workplace documents including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types, characteristics, uses, limitations and preparation of materials and equipment used in piano repair and manufacture
- types of tools and equipment used to apply hardware and fixings and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

- | |
|--|
| <ul style="list-style-type: none">• characteristics of hardware and fixings and their use• problem identification and resolution• set up and operation of tools and equipment used for applying hardware and fixings• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement |
|--|

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Locate, interpret and apply information relevant to selection and use of materials, fasteners, hardware and adhesives for piano repair and manufacture

- Identify, select and apply at least 3 types of fasteners and adhesives to appropriate materials
- Identify surface coatings and finishes used in piano repair and manufacture
- Communicate and work with others in the work area
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Clean tools, equipment and work area
- Maintain and repair a range of hand and power tools used in piano repair
- Apply OHS practices when using hand and power tools, holding and support equipment, products and materials, including use of personal protective equipment

Context of and specific resources for assessment

Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements

Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.

The following resources should be made available:

- hand and power tools used in the repair and manufacture of pianos
- materials used in the repair and manufacture of pianos
- safety and personal protective equipment
- holding and supporting equipment
- workplace location or simulated workplace

Method of assessment

Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of

EVIDENCE GUIDE

skills and knowledge when:

- organising work
- completing tasks according to instructions
- working systematically with attention to detail
- identifying improvements and avoiding damage
- using workplace practices
- using OHS practices
- assessing operational readiness of tools and equipment
- recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions

Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit

Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

The following examples are appropriate for this unit:

- direct observation of the candidate performing a variety of work tasks that involve the use of different hand and power tools, materials and equipment
- oral and written questions about the safe and effective use of fasteners, adhesives, surface coatings and finishes, and hardware, the appropriateness of various tools for particular jobs, and maintenance and storage of materials, tools and equipment
- review of portfolios of evidence and third party workplace reports of the candidate's on-the-job performance

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
Timber may include:	<ul style="list-style-type: none"> spruce, ebony, beech, birch, hardwood, softwood, veneers, chipboard and MDF
Metal may include:	<ul style="list-style-type: none"> aluminium, steel, solders, cast iron, brass
Felts may include:	<ul style="list-style-type: none"> wool, synthetic
Synthetics may include:	<ul style="list-style-type: none"> plastic (keys, bushings, damper head, damper flanges, hammer butt, jack, jack flange, capstone)
Other materials may include:	<ul style="list-style-type: none"> ivory, leather
Characteristics of timber may include:	<ul style="list-style-type: none"> density, moisture content, grain, shrinkage, knots
Structural requirements may include:	<ul style="list-style-type: none"> hardness, density
Aesthetic requirements may include:	<ul style="list-style-type: none"> growth rings, veneers, medullary rays, colour, grain patterns
Fasteners may include:	<ul style="list-style-type: none"> screws (head, slot, machine and thread types), nails (panel pins)
Adhesives may include:	<ul style="list-style-type: none"> animal (horse, fish), PVA, contact, epoxy, casein, latex
Work site may include:	<ul style="list-style-type: none"> workshop or factory location or onsite at client's premises
Holding and supporting equipment may include:	<ul style="list-style-type: none"> portable workbench, clamps, vices, gripper mats
Personal protective equipment may include:	Safety glasses, goggles, hearing protection, safety footwear, protective clothing, gloves, respiratory protection.

RANGE STATEMENT	
OHS requirements may include:	<ul style="list-style-type: none"> relevant Federal, State or Territory OHS legislation, regulations, standards and codes of practice, and workplace policies and procedures including the use of personal protection equipment, hazard and risk control and manual handling.
Clamping techniques may include:	<ul style="list-style-type: none"> sash, 'G', spring, pipe
Surface coatings may include:	<ul style="list-style-type: none"> shellack, single pack, polyurethane (two pack), nitro-cellulose and pre-catalysed lacquers, woodgrain fillers, stains, oils, enamels, acrylics
Finishes may include:	<ul style="list-style-type: none"> high gloss, gloss, satin, matt, limed, pigmented
Hardware may include:	<ul style="list-style-type: none"> locks, hinges - butt, escutcheon inserts, sliding rollers/runners, knobs, handles, finger guards, castors
Workplace documentation may include:	Time sheets, customer cards, work orders including job sheets, cutting lists, plans, drawings and designs, tool maintenance records and schedules

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPT3003A Repair upright and grand piano action, keys and pedals

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to repair upright and grand piano action, keys and pedals.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to carry out repairs on actions, keyboards and pedals for upright and grand pianos. The unit applies in a workplace and onsite environment and may be conducted in a small to large scale enterprise.</p> <p>The type of work tasks performed when carrying out minor repairs on piano actions, keys and pedals may include removal and replacement of: keys and key leads; damaged or worn felts, leathers and action springs; and broken hammerheads.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for repairing action, keys and pedals	<p>1.1. OHS requirements, legislative requirements and workplace practices relevant to repairing pianos are verified and complied with.</p> <p>1.2. Customer requirements are received, analysed and confirmed with appropriate personnel.</p> <p>1.3. Communication with others involved with the work is established and maintained to ensure efficient workflow, coordination, personnel cooperation and safety throughout the application of this competency.</p> <p>1.4. Written instructions are followed.</p>
2. Prepare for repair	<p>2.1. Tools and equipment are selected consistent with the needs of the job.</p> <p>2.2. Selected tools and equipment are checked for service ability and safety and any faults repaired and reported according to workplace practices</p> <p>2.3. Personal protective equipment is correctly fitted and used</p> <p>2.4. Materials required for the repair of piano action, keys and pedals are selected</p>
3. Repair piano action, keys and pedals	<p>3.1. Correct posture for repairing is demonstrated which minimizes fatigue and promotes muscular control.</p> <p>3.2. Tools and equipment are applied in the repair process</p> <p>3.3. Action and keys are removed or dismantled, as required by the repairing process</p> <p>3.4. Faulty or damaged parts are removed from action, keys and pedals</p> <p>3.5. Action parts are re-centred, as required</p> <p>3.6. Materials for replacement felts and leathers are selected, cut and glued to action parts</p> <p>3.7. Faulty or damaged parts are replaced in accordance with manufacturer's recommendations and workplace practices</p> <p>3.8. Quality of the repair process is continuously monitored in accordance with workplace practice and quality procedures</p> <p>3.9. Piano action, keys and pedals are re-assembled according to workplace practices</p>
4. Clean up work area	<p>4.1. All tools, materials and other equipment are checked, cleaned and returned to their appropriate location.</p>

ELEMENT	PERFORMANCE CRITERIA
	4.2. Work area is cleared and waste removed 4.3. <i>Workplace documentation</i> is completed and filed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to piano tuning and repair work orders, work plans and safety procedures
- complete standardized workplace information
- work with others and in a team to repair pianos
- use pre-checking and inspection techniques to anticipate problems and identify tools or equipment faults and take appropriate action
- participate in establishing new ideas and work specifications for repairing in pianos
- plan and organize activities to avoid any backtracking, workflow interruptions, rework or wastage, including preparation and layout of the worksite and selection of tools and equipment
- manage own work performance to:
 - follow OHS and workplace practices
 - plan and organize work schedules and routines
 - maintain required production output
 - assess quality of own work
- locate, interpret and apply information on piano technology and the use and maintenance of hand and power tools
- use hand and power tools to repair pianos
- use equipment to maintain and repair hand tools, power tools and holding and supporting equipment

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for repairing upright and grand piano actions, keys and pedals
- organisational and site standards, requirements, policies and procedures for repairing upright and grand piano actions, keys and pedals
- reading and interpreting workplace documents including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types, characteristics, uses, limitations and preparation of materials and equipment used in piano repair and manufacture
- types of tools and equipment used to repair actions, keys and pedals and procedures for their safe use, operation and maintenance
- problem identification and resolution
- set up and operation of tools and equipment used for repairing actions, keys and

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <p>pedals</p> <ul style="list-style-type: none">• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks to repair upright and grand piano actions, keys and pedals
- Identify tools and equipment used in repairing actions, keys and pedals
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Repair a minimum of two actions, keys and pedals in both upright and grand pianos
- Modify activities to cater for variations in workplace contexts and environment
- Communicate and work with others in the work area
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Clean tools, equipment and work area
- Maintain and repair a range of hand and power tools used in piano repair
- Apply OHS practices when using hand and power tools, holding and support equipment, products and materials, including use of personal protective equipment

Context of and specific resources for assessment

Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements

Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.

The following resources should be made available:

- hand and power tools used in the repair and manufacture of pianos
- materials used in the repair and manufacture of pianos
- safety and personal protective equipment

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • holding and supporting equipment • workplace location or simulated workplace • upright and grand pianos
Method of assessment	<p>Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:</p> <ul style="list-style-type: none"> • organising work • completing tasks according to instructions • working systematically with attention to detail • identifying improvements and avoiding damage • using workplace practices • using OHS practices • assessing operational readiness of tools and equipment • recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions <p>Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit</p> <p>Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements may include:	Relevant Federal, State or Territory OHS legislation, regulations, standards and codes of practice, and workplace policies and procedures including the use of personal protection equipment, hazard and risk control and manual handling.
Legislative requirements may include:	Relevant Federal, State or Territory legislation including award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, industry codes of practice.
Workplace practices may include:	Site guidelines, policies and procedures relating to own role, quality assurance, procedural manuals, tool manufacturer's recommendations, ethical standards, recording and reporting, equipment use, maintenance and storage, environmental management (waste disposal, recycling, re-use).
Tools and equipment may include:	<ul style="list-style-type: none"> knives, guillotine, measuring equipment, centering equipment, glue brushes and sticks, glue pot,
Personal protective equipment may include:	Safety glasses, goggles, hearing protection, safety footwear, protective clothing, gloves, respiratory protection
Materials may include:	<ul style="list-style-type: none"> action felts and leathers, key bushings, key frame materials, springs, action components, key tops, pedal caps, pedal trap bushings, center pins, hammer heads, bridle tapes
Correct posture may include:	<ul style="list-style-type: none"> Standing or seating, according to type of piano and height of individual Even distribution of body weight between both feet while standing, to reduce fatigue Rest arm where available to aid control during

RANGE STATEMENT	
	tuning and reduce tiredness
Faulty or damaged parts may include:	<ul style="list-style-type: none"> • action <ul style="list-style-type: none"> • broken damper springs, faulty hammer heads and shanks, faulty hardware • keys <ul style="list-style-type: none"> • broken keys, discoloured keys, faulty key leads • pedals <ul style="list-style-type: none"> • loose/worn pedal caps, worn pedal felt, damaged trap work, broken pedals
Re-centering of action parts may include:	Identification of faulty center pins, extraction of faulty centre pins, re-bushing flanges, replacement of center pins, replacement of flanges
Felts and leathers may include:	<p>Felts - box cloth, cushion felt, check felt, Hammer-rest baise, backtouch baise, nameboard felt, celeste-rail felt, bushing felt and damper felts.</p> <p>Leathers - doeskin, pigskin, sheepskin, kangaroo skin, splitskin.</p>
Workplace documentation may include:	Time sheets, customer cards, work orders including job sheets, cutting lists, plans, drawings and designs, tool maintenance records and schedules

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPT3004A Rebuild upright and grand piano action, keys and pedals

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to rebuild upright and grand piano action, keys and pedals.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to rebuild actions, keyboards and pedals for upright and grand pianos. The unit applies in a workplace and onsite environment and may be conducted in a small to large scale enterprise.</p> <p>The type of work tasks performed when carrying out rebuilding tasks on piano actions, keys and pedals may include removal and rebuilding of: keys and key leads; damaged or worn felts, leathers and action springs; and broken hammerheads.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for rebuilding action, keys and pedals	<p>1.1. OHS requirements, legislative requirements and workplace practices relevant to rebuilding pianos are verified and complied with.</p> <p>1.2. Customer requirements are received, analysed and confirmed with appropriate personnel.</p> <p>1.3. Communication with others involved with the work is established and maintained to ensure efficient workflow, coordination, personnel cooperation and safety throughout the application of this competency.</p> <p>1.4. Written instructions are followed.</p>
2. Prepare to rebuild	<p>2.1. Tools and equipment are selected consistent with the needs of the job.</p> <p>2.2. Selected tools and equipment are checked for service ability and safety and any faults repaired and reported according to workplace practices</p> <p>2.3. Personal protective equipment is correctly fitted and used</p> <p>2.4. Materials required for the repair of piano action, keys and pedals are selected</p>
3. Dismantle action and keys	<p>3.1. Correct posture for rebuilding is demonstrated, which minimizes fatigue and promotes muscular control</p> <p>3.2. Action is dismantled and all parts are named and numbered.</p> <p>3.3. Keys are removed from keyboard and named and numbered.</p> <p>3.4. Pedals are removed.</p>
4. Rebuild parts	<p>4.1. Parts to be rebuilt or reconditioned are identified.</p> <p>4.2. Parts are measured and stripped of old materials in preparation for reconditioning.</p> <p>4.3. Parts are measured and reconfigured in preparation for rebuilding.</p> <p>4.4. Rebuilding or reconditioning of action, key and pedals is carried out as required.</p> <p>4.5. Quality of the rebuilding process is continuously monitored in accordance with workplace practice and quality procedures.</p> <p>4.6. Piano action, keys and pedals are re-assembled according to workplace practices</p>

ELEMENT	PERFORMANCE CRITERIA
5. Clean up work area	5.1. All tools, materials and other equipment are checked, cleaned and returned to their appropriate location. 5.2. Work area is cleared and waste removed 5.3. <i>Workplace documentation</i> is completed and filed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate ideas and information to enable confirmation of work requirements, plans and specifications, coordination of work with other workers and customer, and report of work outcomes and problems
- complete standardized workplace information
- work with others and in a team to rebuild pianos
- use pre-checking and inspection techniques to anticipate problems and identify tools or equipment faults and take appropriate action
- participate in establishing new ideas and work specifications for tuning pianos and repairing faults
- plan and organize activities to avoid any backtracking, workflow interruptions, rework or wastage, including preparation and layout of the worksite and selection of tools and equipment
- manage own work performance to:
 - follow OHS and workplace practices
 - plan and organize work schedules and routines
 - maintain required production output
 - assess quality of own work
- locate, interpret and apply information on piano technology and the use and maintenance of hand and power tools
- use workplace technology related to piano technology, including specified tools, equipment, calculators and measuring devices for piano rebuilding

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for rebuilding actions, keys and pedals on upright and grand pianos
- organisational and site standards, requirements, policies and procedures for rebuilding actions, keys and pedals on upright and grand pianos
- reading and interpreting workplace documents including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- terms used to describe components of an upright and grand piano
- types, characteristics, uses, limitations and preparation of materials and equipment used in rebuilding actions, keys and pedals on upright and grand pianos
- types of tools and equipment used to apply hardware and fixings and procedures for their safe use, operation and maintenance

REQUIRED SKILLS AND KNOWLEDGE

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| <ul style="list-style-type: none">• characteristics of hardware and fixings and their use• problem identification and resolution• set up and operation of tools and equipment used for rebuilding actions, keys and pedals on upright and grand pianos• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks to rebuild upright and grand piano actions, keys and pedals
- Identify tools and equipment used in rebuilding actions, keys and pedals
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Rebuild a minimum of two actions, keys and pedals in both upright and grand pianos
- Modify activities to cater for variations in workplace contexts and environment
- Communicate and work with others in the work area
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Clean tools, equipment and work area
- Maintain and repair a range of hand and power tools used in piano rebuilding
- Apply OHS practices when using hand and power tools, holding and support equipment, products and materials, including use of personal protective equipment

Context of and specific resources for assessment

Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements

Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.

The following resources should be made available:

- hand and power tools used in the repair and manufacture of pianos
- materials used in the repair and manufacture of pianos
- safety and personal protective equipment

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • holding and supporting equipment • workplace location or simulated workplace • upright and grand pianos
Method of assessment	<p>Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:</p> <ul style="list-style-type: none"> • organising work • completing tasks according to instructions • working systematically with attention to detail • identifying improvements and avoiding damage • using workplace practices • using OHS practices • assessing operational readiness of tools and equipment • recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions <p>Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit</p> <p>Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements may include:	Relevant Federal, State or Territory OHS legislation, regulations, standards and codes of practice, and workplace policies and procedures including the use of personal protection equipment, hazard and risk control and manual handling.
Legislative requirements may include:	Relevant Federal, State or Territory legislation including award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, industry codes of practice.
Workplace practices may include:	Site guidelines, policies and procedures relating to own role, quality assurance, procedural manuals, tool manufacturer's recommendations, ethical standards, recording and reporting, equipment use, maintenance and storage, environmental management (waste disposal, recycling, re-use).
Tools and equipment may include:	<ul style="list-style-type: none"> knives, guillotine, measuring equipment, centering equipment, glue brushes and sticks, glue pot
Personal protective equipment may include	Safety glasses, goggles, hearing protection, safety footwear, protective clothing, gloves, respiratory protection
Correct posture may include:	<ul style="list-style-type: none"> Standing or seating, according to type of piano and height of individual Even distribution of body weight between both feet while standing, to reduce fatigue Rest arm where available to aid control during tuning and reduce tiredness
Materials may include:	<ul style="list-style-type: none"> action felts and leathers, key bushings, key frame materials, springs, action components, key tops, pedal caps, pedal trap bushings,

RANGE STATEMENT	
	centre pins, hammer heads, bridle tapes
Rebuilding may include:	<ul style="list-style-type: none"> replacing the following with new components - hammer heads and assembly, wippen assembly, keys, action rails, pedals and trappings, springs, action brackets
Reconditioning may include:	<ul style="list-style-type: none"> repairing action components to an as new condition using existing parts with new materials
Workplace documentation may include:	Time sheets, customer cards, work orders including job sheets, cutting lists, plans, drawings and designs, tool maintenance records and schedules

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPT3005A Re-string and re-pin a piano

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge to remove existing strings and pins and replace with new.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to remove existing strings and pins from upright and grand pianos and replace them with new strings and pins. The unit applies in a workplace and onsite environment and may be conducted in a small to medium scale enterprise.</p> <p>The type of work tasks performed when re-stringing and re-pinning a piano may include disassembling and reassembling piano, assessing piano suitability for restringing, detuning piano, chipping up and measuring strings and pin positions for replacement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for re-stringing and re-pinning	1.1. OHS requirements, legislative requirements and workplace practices relevant to repairing pianos are verified and complied with 1.2. Customer requirements are received, analysed and confirmed with appropriate personnel 1.3. Communication with others involved with the work is established and maintained to ensure efficient workflow, coordination, personnel cooperation and safety throughout the application of this competency 1.4. Written instructions are followed
2. Prepare for repair	2.1. Tools and equipment are selected consistent with the needs of the job. 2.2. Selected tools and equipment are checked for service ability and safety and any faults repaired and reported according to workplace practices 2.3. Personal protective equipment is correctly fitted and used 2.4. Materials required for the re-stringing and re-pinning of piano are selected
3. Assess piano	3.1. Correct posture for repairing is demonstrated which minimizes fatigue and promotes muscular control 3.2. Case parts are removed and stored 3.3. Measurements of all string sizes are taken throughout piano 3.4. Position of all pressure bars, duplex bars and under-stringing felts are noted 3.5. Inspect base strings for tone and quality, noting those needing replacement
4. Prepare piano for re-stringing	4.1. Length of strings are measured and recorded 4.2. Detune piano 4.3. Pressure bars / agraffes are removed 4.4. Strings are removed by unwinding in order 4.5. Bass strings are tagged for identification purposes using a wire guide to store until needed 4.6. Tuning pins are removed and assessed for reusability 4.7. Samples of tuning pins, felts and eye strings are retained 4.8. Size of new pins and drill holes are calculated for appropriate tension requirements

ELEMENT	PERFORMANCE CRITERIA
5. Re-pin and re-string piano 6.	6.1.Stringing scale is re-calculated 6.2.Agraffes are replaced in accurate position, as required. 6.3.Pins and treble strings are replaced in required order, with <i>under stringing felt</i> inserted. 6.4.Pins and base strings are replaced in required order 6.5.Pressure bars are replaced in accurate position
7. Chip Up	7.1.Establish <i>Pitch Standard</i> 7.2.Pluck and tune strings individually against Pitch Standard 7.3.Rub down strings and repeat process until strings stabilised
8. Re-assemble piano	8.1.Piano is re-assembled 8.2.Tools and equipment are maintained, cleaned and stored safely in designated location 8.3.Records are maintained in accordance with enterprise requirements or industry practice
9. Clean up work area	9.1.All tools, materials and other equipment are checked, cleaned and returned to their appropriate location. 9.2.Work area is cleared and waste removed 9.3. <i>Workplace documentation</i> is completed and filed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate ideas and information to enable confirmation of work requirements, plans and specifications, coordination of work with other workers and customer, and report of work outcomes and problems
- work with others and in a team to assess tuning and repair requirements
- apply knowledge of tuning and repair processes to problem solving
- assess and take appropriate action to minimize risks
- collect and organize information for the purpose of:
 - planning tasks and identifying task outcomes
 - planning use of resources
 - assessing and prioritizing tasks
 - managing time and resources
- Manage own work performance to:
 - follow OHS and workplace practices
 - plan and organize work schedules and routines
 - maintain required production output
 - assess quality of own work
- apply mathematical applications for estimation and measurement
- use calculators and measuring devices to take measurements and estimate material requirements

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for restringing and re-pinning upright and grand pianos
- organisational and site standards, requirements, policies and procedures for restringing and re-pinning upright and grand piano
- reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types, characteristics, uses, limitations and preparation of materials and equipment used in piano restringing and re-pinning
- types of tools and equipment used to restring and re-pin pianos and procedures for their safe use, operation and maintenance
- problem identification and resolution
- set up and operation of tools and equipment used for restringing and re-pinning

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <p>pianos</p> <ul style="list-style-type: none">• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks to restring and re-pin a piano
- Identify tools and equipment used in restringing and re-pinning a piano
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Restring and re-pin a minimum of two upright and grand pianos
- Modify activities to cater for variations in workplace contexts and environment
- Communicate and work with others in the work area
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Clean tools, equipment and work area
- Maintain and repair a range of hand and power tools used in piano tuning and repair
- Apply OHS practices when using hand and power tools, holding and support equipment, products and materials, including use of personal protective equipment

Context of and specific resources for assessment

Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements

Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.

The following resources should be made available:

- hand and power tools used in the repair and manufacture of pianos
- materials used in the repair and manufacture of pianos
- safety and personal protective equipment

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • holding and supporting equipment • workplace location or simulated workplace • upright and grand pianos
Method of assessment	<p>Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:</p> <ul style="list-style-type: none"> • organising work • completing tasks according to instructions • working systematically with attention to detail • identifying improvements and avoiding damage • using workplace practices • using OHS practices • assessing operational readiness of tools and equipment • recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions <p>Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit</p> <p>Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements may include:	Relevant Federal, State or Territory OHS legislation, regulations, standards and codes of practice, and workplace policies and procedures including the use of personal protection equipment, hazard and risk control and manual handling.
Legislative requirements may include:	Relevant Federal, State or Territory legislation including award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, industry codes of practice.
Workplace practices may include:	Site guidelines, policies and procedures relating to own role, quality assurance, procedural manuals, tool manufacturer's recommendations, ethical standards, recording and reporting, equipment use, maintenance and storage, environmental management (waste disposal, recycling, re-use).
Tools and equipment may include:	<ul style="list-style-type: none"> • micrometer, Tuning hammer, Tuning fork, Pitch standard, T hammer, String lifter, Drills and bits, Tension wrench, Hammers and punches, Wire cutters, Pliers, Vice grips, Stringing tools, measuring equipment, re-scaling tools, knives, glue, plectrum, glove
Personal protective equipment may include:	<ul style="list-style-type: none"> • safety glasses, goggles, hearing protection, safety footwear, protective clothing, gloves, respiratory protection
Materials may include:	<ul style="list-style-type: none"> • treble and bass strings • tuning pins • understringing felt • agraffes
Identification purposes may include:	<ul style="list-style-type: none"> • name and address • brand name, style, size or serial number of

RANGE STATEMENT	
	piano <ul style="list-style-type: none"> • strings per note
Eye strings may include:	<ul style="list-style-type: none"> • single wound german • double wound german • french eye
Understringing felt may include:	<ul style="list-style-type: none"> • string pillows • bearing felt • listing felt • pressure bar felt
Pitch standard may include:	<ul style="list-style-type: none"> • piano • electronic keyboard • electronic tuning device (etd) • tuning fork
Workplace documentation may include:	Time sheets, customer cards, work orders including job sheets, cutting lists, plans, drawings and designs, tool maintenance records and schedules

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFPT3006A Regulate action, keys and pedals of upright pianos

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to regulate upright piano action, keys and pedals.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to regulate upright piano actions, keys and pedals and may include carrying out a series of adjustments to ensure optimum performance of the piano. The unit applies in a workplace and onsite environment and may be conducted in a small to large scale enterprise.</p> <p>The type of work tasks performed when relating upright pianos may include adjusting: action rail, striking distance, hammer running alignment, key depth, lost motion, set off, checking distance, damper spoon bending, damper stop rail, jack stop rail and sustain, soft, mute and sostenuto pedals.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for regulating action, keys and pedals	1.1. OHS requirements, legislative requirements and workplace practices relevant to regulating pianos are verified and complied with. 1.2. Customer requirements are received, analysed and confirmed with appropriate personnel. 1.3. Communication with others involved with the work is established and maintained to ensure efficient workflow, coordination, personnel cooperation and safety throughout the application of this competency. 1.4. Written instructions are followed.
2. Prepare to regulate	2.1. Correct posture for regulating is demonstrated which minimizes fatigue and promotes muscular control 2.2. Tools and equipment are selected consistent with the needs of the job. 2.3. Selected tools and equipment are checked for service ability and safety and any faults repaired and reported according to workplace practices 2.4. Personal protective equipment is correctly fitted and used
3. Align action components	3.1. Alignment of action rail is checked and adjusted 3.2. Striking distance is adjusted to industry specifications 3.3. Hammer running alignment and angling is adjusted 3.4. Wippen alignment procedures are performed
4. Regulate keyboard	4.1. Keys are spaced according to industry specifications 4.2. Keys are levelled 4.3. Key depth is adjusted
5. Regulate action	5.1. Lost motion is adjusted 5.2. Set off is adjusted 5.3. Checking distance is adjusted 5.4. Dampers are regulated to industry specifications 5.5. Damper spoon bending is adjusted to half striking distance 5.6. Damper stop rail and jack stop rail are adjusted to industry specifications
6. Adjust pedals	6.1. Sustain pedal is adjusted to lift when the pedal is one third through its motion 6.2. Soft pedal is adjusted to an acceptable lost motion

ELEMENT	PERFORMANCE CRITERIA
	<p>6.3. Mute pedal is adjusted for hammers to clear felt in rest position but strike felt in lock down position</p> <p>6.4. Sostenuto pedal is adjusted so relevant dampers are locked in position when note is played</p>
7. Final check and inspection	<p>7.1. Upright piano is inspected for playability and performance</p> <p>7.2. Adjustments to action and pedals as required</p>
8. Clean up work area	<p>8.1. All tools, materials and other equipment are checked, cleaned and returned to their appropriate location</p> <p>8.2. Work area is cleared and waste removed</p> <p>8.3. <i>Workplace documentation</i> is completed and filed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- read and understand documentation
- identify team performance required to meet customer needs
- use pre-checking and inspection techniques to anticipate problems and identify tools or equipment faults and take appropriate action
- show independence and initiative in making decisions
- plan and organize activities to avoid any backtracking, workflow interruptions, re-work or wastage, including preparation and layout of the worksite and selection of tools and equipment
- prioritise own work to meet customer requirements regarding completion time
- adapt to new skill requirements
- use workplace technology related to piano technology, including specified tools, equipment, calculators and measuring devices for piano tuning and repair

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for regulating upright piano actions, keys and pedals
- organisational and site standards, requirements, policies and procedures for regulating upright piano actions, keys and pedals
- reading and interpreting workplace documents including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types, characteristics, uses, limitations and preparation of materials and equipment used in piano regulating
- types of tools and equipment used to regulate actions, keys and pedals and procedures for their safe use, operation and maintenance
- problem identification and resolution
- set up and operation of tools and equipment used for regulating actions, keys and pedals
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks to regulate upright piano actions, keys and pedals
- Identify tools and equipment used in regulating actions, keys and pedals
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Regulate a minimum of three actions, keys and pedals in upright pianos
- Modify activities to cater for variations in workplace contexts and environment
- Communicate and work with others in the work area
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Clean tools, equipment and work area
- Maintain and repair a range of hand and power tools used in piano regulation and repair
- Apply OHS practices when using hand and power tools, holding and support equipment, products and materials, including use of personal protective equipment

Context of and specific resources for assessment

Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements

Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.

The following resources should be made available:

- hand and power tools used in the tuning and repair of pianos
- materials used in the tuning and repair of pianos
- safety and personal protective equipment
- holding and supporting equipment

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • workplace location or simulated workplace • upright pianos
Method of assessment	<p>Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:</p> <ul style="list-style-type: none"> • organising work • completing tasks according to instructions • working systematically with attention to detail • identifying improvements and avoiding damage • using workplace practices • using OHS practices • assessing operational readiness of tools and equipment • recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions <p>Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit</p> <p>Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements may include:	Relevant Federal, State or Territory OHS legislation, regulations, standards and codes of practice, and workplace policies and procedures including the use of personal protection equipment, hazard and risk control and manual handling.
Legislative requirements may include:	Relevant Federal, State or Territory legislation including award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, industry codes of practice.
Workplace practices may include:	Site guidelines, policies and procedures relating to own role, quality assurance, procedural manuals, tool manufacturer's recommendations, ethical standards, recording and reporting, equipment use, maintenance and storage, environmental management (waste disposal, recycling, re-use).
Correct posture may include:	<p>Standing or seating, according to type of piano and height of individual</p> <p>Even distribution of body weight between both feet while standing, to reduce fatigue</p> <p>Rest arm where available to aid control during tuning and reduce tiredness</p>
Tools and equipment may include:	Capstan regulator, set off regulator, touch/dip block, rule, regulating buttons, damper regulator, key easing pliers, wire bender, screw driver
Personal protective equipment may include:	Safety glasses, goggles, hearing protection, safety footwear, protective clothing, gloves, respiratory protection
Acceptable lost motion may	2mm movement of pedal rod before hammer rest

RANGE STATEMENT	
include:	is activated
Workplace documentation may include:	Time sheets, customer cards, work orders including job sheets, cutting lists, plans, drawings and designs, tool maintenance records and schedules

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPT3007A Regulate actions, keys and pedals of grand pianos

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to demonstrate all the procedures in the regulation of actions, keys and pedals of grand pianos.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to regulate grand piano actions, keys and pedals and may include carrying out a series of adjustments to ensure optimum performance of the piano. The unit applies in a workplace and onsite environment and may be conducted in a small to large scale enterprise.</p> <p>The type of work tasks performed when relating upright pianos may include alignment of: action rail, hammer running, wippen and jack to roller; and a series of related adjustments.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for work	1.1. OHS requirements, legislative requirements and workplace practices relevant to repairing pianos are verified and complied with. 1.2. Customer requirements are received, analysed and confirmed with appropriate personnel. 1.3. Communication with others involved with the work is established and maintained to ensure efficient workflow, co-ordination, personnel co-operation and safety throughout the application of this competency. 1.4. Written instructions are followed.
2. Prepare, measure and assess	2.1. Correct posture for regulating is demonstrated which minimizes fatigue and promotes muscular control 2.2. Tools and equipment are selected consistent with the needs of the job. 2.3. Selected tools and equipment are checked for service ability and safety and any faults repaired and reported according to workplace practices 2.4. Personal protective equipment is correctly fitted and used 2.5. Set trial regulation standards to determine correct action operation 2.6. Check and re-adjust as required
3. Align action components	3.1. Alignment of action rail is checked and adjusted 3.2. Hammer running alignment and angling is adjusted 3.3. Wippen alignment procedures are performed 3.4. Bed action to key frame and key frame to key bed
4. Regulate keys	4.1. Keys are levelled, squared and spaced according to industry specifications 4.2. Key depth is adjusted
5. Regulate action	5.1. Jack to roller alignment and repetition lever height is adjusted 5.2. Striking distance is adjusted to industry specifications 5.3. Let off is adjusted 5.4. Checking distance is adjusted 5.5. Repetition spring adjusted 5.6. Hammer drop adjusted 5.7. Dampers are regulated to industry specifications

ELEMENT	PERFORMANCE CRITERIA
6. Regulate pedals	6.1.Sustain pedal adjusted with slight lost motion 6.2.Sostenuto pedal operations adjusted as per industry specification 6.3.Una-corda pedal adjusted to industry specification
7. Final check and inspection	7.1.Grand piano is inspected for playability and performance 7.2.Adjustments to action and pedals as required
8. Clean up	8.1.All tools, materials and other equipment are checked, cleaned and returned to their appropriate location 8.2.Work area is cleared and waste removed 8.3. Workplace documentation is completed and filed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- read and understand documentation
- identify team performance required to meet customer needs
- use pre-checking and inspection techniques to anticipate problems and identify tools or equipment faults and take appropriate action
- show independence and initiative in making decisions
- plan and organize activities to avoid any backtracking, workflow interruptions, re-work or wastage, including preparation and layout of the worksite and selection of tools and equipment
- prioritise own work to meet customer requirements regarding completion time
- adapt to new skill requirements
- use workplace technology related to piano technology, including specified tools, equipment, calculators and measuring devices for piano tuning and repair

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for regulating grand piano actions, keys and pedals
- organisational and site standards, requirements, policies and procedures for regulating grand piano actions, keys and pedals
- reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types, characteristics, uses, limitations and preparation of materials and equipment used in piano regulating
- types of tools and equipment used to regulate actions, keys and pedals and procedures for their safe use, operation and maintenance
- problem identification and resolution
- set up and operation of tools and equipment used for regulating actions, keys and pedals
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks to regulate grand piano actions, keys and pedals
- Identify tools and equipment used in regulating actions, keys and pedals
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Regulate a minimum of three actions, keys and pedals in grand pianos
- Modify activities to cater for variations in workplace contexts and environment
- Communicate and work with others in the work area
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Clean tools, equipment and work area
- Maintain and repair a range of hand and power tools used in piano regulation and repair
- Apply OHS practices when using hand and power tools, holding and support equipment, products and materials, including use of personal protective equipment

Context of and specific resources for assessment

Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements

Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.

The following resources should be made available:

- hand and power tools used in the tuning and repair of pianos
- materials used in the tuning and repair of pianos
- safety and personal protective equipment
- holding and supporting equipment

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> workplace location or simulated workplace grand pianos
Method of assessment	<p>Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:</p> <ul style="list-style-type: none"> organising work completing tasks according to instructions working systematically with attention to detail identifying improvements and avoiding damage using workplace practices using OHS practices assessing operational readiness of tools and equipment recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions <p>Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit</p> <p>Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
OHS requirements may include:	Relevant Federal, State or Territory OHS legislation, regulations, standards and codes of practice, and workplace policies and procedures including the use of personal protection equipment, hazard and risk control and manual handling.
Legislative requirements may include:	Relevant Federal, State or Territory legislation including award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, industry codes of practice.
Workplace practices may include:	Site guidelines, policies and procedures relating to own role, quality assurance, procedural manuals, tool manufacturer recommendations, ethical standards, recording and reporting, equipment use, maintenance and storage, environmental management (waste disposal, recycling, re-use).
Correct posture may include:	<ul style="list-style-type: none"> • Standing or seating, according to type of piano and height of individual • Even distribution of body weight between both feet while standing, to reduce fatigue • Rest arm where available to aid control during tuning and reduce tiredness
Tools and equipment may include:	Capstan regulator, set off regulator, touch/dip block, rule, regulating buttons, drop screw driver, spring bender, casting lamp, hammer flange spacer, key easing pliers, wire bender, screw

RANGE STATEMENT	
	driver
Personal protective equipment may include:	Safety glasses, goggles, hearing protection, safety footwear, protective clothing, gloves, respiratory protection
Regulation of dampers may include:	<ul style="list-style-type: none"> • Damper lift • Damper stop rail • Damper travel • Alignment to strings • Damper spacing • Damper guide bushings
Workplace documentation may include:	Time sheets, customer cards, work orders, including job sheets, cutting lists, plans, drawings and designs, tool maintenance records and schedules

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFPT3008A Understand piano tuning theory and basic acoustics

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to understand piano tuning theory and basic acoustics.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to understand the theory of piano tuning and basic acoustics and the important relationship between this and how a piano is tuned.</p> <p>The type of work tasks performed in acquiring knowledge of piano tuning theory and basic acoustics will include research, investigation and some computing skills. Participation in teams including group or team coordination may be included and may be conducted in small to medium scale enterprises.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Acquire knowledge of basic acoustics	1.1. Elements of <i>basic acoustics</i> are explained 1.2. Acoustical laws of sounding strings are explained
2. Acquire knowledge of piano tuning	2.1. Elements of <i>piano tuning theory</i> are explained 2.2. Affect of inharmonicity on piano tuning is explained
3. Acquire knowledge of musical scales	3.1. Elements of <i>musical scale theory</i> are explained 3.2. The behaviour of piano strings and their proper dimensions are explained 3.3. The <i>laws of strings</i> are explained 3.4. Musical scales are identified aurally

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- read and understand documentation
- ask questions to gain information
- collect, organize and understand information related to piano tuning
- work collaboratively with others to complete tasks in a timely manner
- apply knowledge of tuning and repair processes to problem solving
- show independence and initiative in making decisions
- collect and organize information for the purpose of:
 - planning tasks and identifying task outcomes
 - planning use of resources
 - assessing and prioritizing tasks
 - managing time and resources
- assess own skills and knowledge
- research and apply new ideas and techniques
- use IT to organize, report and record information

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to piano tuning
- understanding of basic acoustics
- understanding of piano tuning theory
- understanding of musical scale theory
- established lines of communication and protocols
- problem identification and resolution

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Locate, interpret and apply information relevant to piano tuning
- Basic acoustics are identified and understood
- Piano tuning theory is explained and understood
- Musical scale theory is explained and understood
- All notes on a piano are identified a minimum of two times
- Communicate and work with others in the work area
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products

Context of and specific resources for assessment

- Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements
- Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.
- The following resources should be made available:
 - upright or grand pianos
 - workplace location or simulated workplace

Method of assessment

Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:

- organising work
- completing tasks according to instructions
- working systematically with attention to detail
- identifying improvements and avoiding damage
- using workplace practices
- using OHS practices
- assessing operational readiness of tools and equipment
- recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions

EVIDENCE GUIDE

Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit

Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

The following examples are appropriate for this unit:

oral and written questions about piano tuning theory, basic acoustics and musical scale theory and their application to piano tuning

practical demonstration of identifying piano notes aurally

review of portfolios of evidence and third party workplace reports of the candidate's on-the-job performance

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
Basic acoustics may include	Sound waves, beats, frequencies, harmonics, cycles, partials, overtones, nodes, fundamentals, sine waves, intonation, transients, cents, commas, compound tones, inharmonicity.
Piano Tuning Theory may include:	<ul style="list-style-type: none"> • how wire vibrates • what happens when two or more wires vibrate simultaneously • how vibrations are organised into a tuning scale • how vibrations are related mathematically • pitch, beat rates, intervals, octave stretching.
Musical scale theory may include:	Diatonic scale, equal temperament and why, mean tone.
Laws of Strings may include:	First law, Third law, Combined law and Taylor's Formula, Need for wrapped strings

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPT3009A Develop control of tuning hammers

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to move the tuning pins in very small increments accurately.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to develop control of tuning hammers by moving the tuning pins in very small increments accurately. This unit applies in a workplace and on-site environment and may be conducted in a small to large scale enterprise.</p> <p>Applications may include some complex or non routine activities involving individual responsibility or autonomy and/or collaboration with others through members of groups or teams.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for using tuning hammers	1.1. OHS requirements, legislative requirements and workplace practices relevant to tuning pianos are verified and complied with. 1.2. Communication with others involved with the work is established and maintained to ensure efficient workflow, coordination, personnel co-operation and safety throughout the application of this competency. 1.3. Written instructions are followed.
2. Select tools and equipment	2.1. Tools and equipment are selected consistent with the needs of the job. 2.2. Selected tools and equipment are checked for service ability and safety and any faults repaired and reported according to workplace practices 2.3. Personal protective equipment is correctly fitted and used
3. Set pin in specified position	3.1. Correct posture for tuning is demonstrated which minimizes fatigue and promotes muscular control. 3.2. Pin is set at desired pitch utilising a pitch standard , within accuracy constraints, to + or - 0.5cents. 3.3. Key is struck using stabilising blows. 3.4. Coordinated motor and auditory reflexes are demonstrated throughout tuning. 3.5. Strings are tuned and stabilised using appropriate techniques .
4. Clean up work area	4.1. All tools, materials and other equipment are checked, cleaned and returned to their appropriate location 4.2. Work area is cleared and waste removed 4.3. Workplace documentation is completed and filed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- complete standardized workplace information
- develop positive workplace relationships
- identify, diagnose and rectify faults, to determine if pitch is sharp or flat by using interval checks
- assess and take appropriate action to minimize risks
- collect and organize information for the purpose of:
 - planning tasks and identifying task outcomes
 - planning use of resources
 - assessing and prioritizing tasks
 - managing time and resources
- prioritise own work to meet customer's requirements regarding completion time
- developing skill in control of tuning hammer
- adapt to new skill requirements by using pitch standard and electronic tuning device

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for tuning pianos
- organisational and site standards, requirements, policies and procedures for tuning pianos
- reading and interpreting workplace documents including work orders, work instructions and operator instructions
- piano tuning process
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types, characteristics, uses, limitations and preparation of materials and equipment used in piano tuning
- types of tools and equipment used to tune pianos and procedures for their safe use, operation and maintenance
- problem identification and resolution
- set up and operation of tools and equipment used for tuning pianos
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks to tune and stabilise strings using tuning hammers
- Identify tools and equipment used in tuning pianos
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Set pin and tune and stabilise strings on both upright and grand pianos a minimum of three times, using tuning
- Modify activities to cater for variations in workplace contexts and environment
- Communicate and work with others in the work area
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Clean tools, equipment and work area
- Maintain and repair a range of hand and power tools used in piano regulation and repair
- Apply OHS practices when using hand and power tools, holding and support equipment, products and materials, including use of personal protective equipment

Context of and specific resources for assessment

Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements

Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.

The following resources should be made available:

- hand and power tools used in the tuning and repair of pianos
- materials used in the tuning and repair of pianos
- safety and personal protective equipment
- holding and supporting equipment

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • workplace location or simulated workplace • upright and grand pianos
Method of assessment	<p>Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:</p> <ul style="list-style-type: none"> • organising work • completing tasks according to instructions • working systematically with attention to detail • identifying improvements and avoiding damage • using workplace practices • using OHS practices • assessing operational readiness of tools and equipment • recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions <p>Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit</p> <p>Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
OHS requirements may include:	Relevant Federal, State or Territory OHS legislation, regulations, standards and codes of practice, and workplace policies and procedures including the use of personal protection equipment, hazard and risk control and manual handling.
Legislative requirements may include:	Relevant Federal, State or Territory legislation including award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, industry codes of practice.
Workplace practices may include:	Site guidelines, policies and procedures relating to own role, quality assurance, procedural manuals, tool manufacturer's recommendations, ethical standards, recording and reporting, equipment use, maintenance and storage, environmental management (waste disposal, recycling, re-use).
Tools and equipment may include:	<ul style="list-style-type: none"> • pitch standard • tuning lever/hammer • temperament strip • mutes and wedges • tip wrench • tuning tips and heads
Personal protective equipment may include:	Safety glasses, goggles, hearing protection, safety footwear, protective clothing, gloves, respiratory protection

RANGE STATEMENT	
Correct posture may include:	<ul style="list-style-type: none"> • Standing or seating, according to type of piano and height of individual • Even distribution of body weight between both feet while standing, to reduce fatigue • Rest arm where available to aid control during tuning and reduce tiredness
Pitch standard may include:	<ul style="list-style-type: none"> • piano • electronic keyboard • electronic tuning device (etd) • tuning fork
Hammer techniques may include:	<ul style="list-style-type: none"> • selection of tuning tip and angle • jerking movements • positioning hammer on pin at correct angle to avoid bending of tuning pin
Stabilisation techniques may include:	<ul style="list-style-type: none"> • use of firm key blows in conjunction with placement of pin • calculation of string stretch
Workplace documentation may include:	Time sheets, customer cards, work orders including job sheets, cutting lists, plans, drawings and designs, tool maintenance records and schedules

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPT3010A Pitch raise

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to pitch raise a piano prior to the tuning process.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to calculate and assess the ability of an upright, grand and player piano to achieve the desired pitch. The type of work tasks performed in acquiring the skills and knowledge required to pitch raise a piano include assessing condition of the piano and calculating overpull or stretch of strings.</p> <p>The unit applies in a workplace and on-site environment and may be conducted in a small to large scale enterprises.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		
	<i>LMFPT3007A</i>	<i>Regulate actions, keys and pedals of grand pianos</i>

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for pitch raising	1.1. OHS requirements, legislative requirements and workplace practices relevant to tuning pianos are verified and complied with. 1.2. Customer requirements are received, analysed and confirmed with appropriate personnel. 1.3. Communication with others involved with the work is established and maintained to ensure efficient workflow, coordination, personnel cooperation and safety throughout the application of this competency. 1.4. Written instructions are followed.
2. Prepare to tune unisons	2.1. Tools and equipment are selected consistent with the needs of the job. 2.2. Selected tools and equipment are checked for service ability and safety and any faults repaired and reported according to workplace practices 2.3. Personal protective equipment is correctly fitted and used
3. Assess suitability of piano for pitch raise	3.1. Components used in pitch raising are assessed for suitability. 3.2. Distance from target pitch is determined. 3.3. Overpull/stretch required to achieve target pitch is calculated. 3.4. Pitch standard is established.
4. Pitch Raise Piano	4.1. Correct posture for tuning is demonstrated, which minimizes fatigue and promotes muscular control. 4.2. Tune strings according to required process 4.3. Pitch raise to achieve an accuracy of ± 5 cent per note. 4.4. Correct tuning hammer technique is used.
5. Clean up work area	5.1. All tools, materials and other equipment are checked, cleaned and returned to their appropriate location. 5.2. Work area is cleared and waste removed. 5.3. Workplace documentation is completed and filed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate ideas and information to enable confirmation of work requirements, plans and specifications, co-ordination of work with other workers and customer, and report of work outcomes and problems
- work collaboratively with others to complete tasks in a timely manner
- use pre-checking and inspection techniques to anticipate problems and identify tools or equipment faults and take appropriate action
- identify and select practical solutions to problems using analytical skills
- determine opportunities to improve processes
- plan and organize activities to avoid any backtracking, workflow interruptions, re-work or wastage, including preparation and layout of the worksite and selection of tools and equipment
- take responsibility and display confidence in own ideas
- apply mathematical applications for estimation and measurement
- use workplace technology related to piano technology, including specified tools, equipment, calculators and measuring devices for piano tuning

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for tuning pianos
- organisational and site standards, requirements, policies and procedures for tuning pianos
- reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types, characteristics, uses, limitations and preparation of materials and equipment used in piano tuning
- types of tools and equipment used to regulate actions, keys and pedals and procedures for their safe use, operation and maintenance
- problem identification and resolution
- set up and operation of tools and equipment used for tuning pianos
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks to pitch raise upright, grand and player pianos
- Identify tools and equipment used in pitch raising
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Tune a minimum of three sets of strings on at least an upright and grand piano
- Pitch raise a minimum of three times on at least an upright and grand piano
- Modify activities to cater for variations in workplace contexts and environment
- Communicate and work with others in the work area
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Clean tools, equipment and work area
- Maintain and repair a range of hand and power tools used in piano regulation and repair
- Apply OHS practices when using hand and power tools, holding and support equipment, products and materials, including use of personal protective equipment

Context of and specific resources for assessment

Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements

Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.

The following resources should be made available:

- hand and power tools used in the tuning and repair of pianos
- materials used in the tuning and repair of pianos
- safety and personal protective equipment

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • holding and supporting equipment • workplace location or simulated workplace • upright and grand pianos
Method of assessment	<p>Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:</p> <ul style="list-style-type: none"> • organising work • completing tasks according to instructions • working systematically with attention to detail • identifying improvements and avoiding damage • using workplace practices • using OHS practices • assessing operational readiness of tools and equipment • recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions <p>Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit</p> <p>Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
OHS requirements may include:	Relevant Federal, State or Territory OHS legislation, regulations, standards and codes of practice, and workplace policies and procedures, including the use of personal protection equipment, hazard and risk control and manual handling.
Legislative requirements may include:	Relevant Federal, State or Territory legislation including award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, industry codes of practice.
Workplace practices may include:	Site guidelines, policies and procedures relating to own role, quality assurance, procedural manuals, tool manufacturer's recommendations, ethical standards, recording and reporting, equipment use, maintenance and storage, environmental management (waste disposal, recycling, re-use).
Tools and equipment may include:	<ul style="list-style-type: none"> • tuning fork • tuning lever/hammer • temperament strip • mutes and wedges • tip wrench • tuning tips and heads • pitch standard
Personal protective equipment may include:	Safety glasses, goggles, hearing protection, safety footwear, protective clothing, gloves, respiratory protection

RANGE STATEMENT	
Components may include:	<ul style="list-style-type: none"> • strings • wrest plank / tuning plank • frame • soundboard • bridges
Pitch standard may include:	<ul style="list-style-type: none"> • piano • electronic keyboard • electronic tuning device (ETD) • tuning fork
Correct posture may include:	<ul style="list-style-type: none"> • Standing or seating, according to type of piano and height of individual • Even distribution of body weight between both feet while standing, to reduce fatigue • Rest arm where available to aid control during tuning and reduce tiredness
Pitch raising may occur:	<ul style="list-style-type: none"> • when a piano is more than one cycle flat or sharp from desired standard
Tuning process may include:	<p>For a small pitch raise, normal tuning sequence is followed.</p> <p>For a significant pitch raise, chromatic tuning from note #1 could be required.</p>
Workplace documentation may include:	Time sheets, customer cards, work orders including job sheets, cutting lists, plans, drawings and designs, tool maintenance records and schedules

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPT3011A Tune unisons aurally to a beatless condition

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to tune unisons aurally so they achieve an even and accurate pitch.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to tune unisons aurally to a beatless condition, ensuring an even and accurate pitch is achieved, and may include the use of hammers and stabilisation techniques.</p> <p>The unit applies in a workplace and on-site environment and may be conducted in a small to large scale enterprises.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		
	<i>LMFPT3007A</i>	<i>Regulate actions, keys and pedals of grand pianos</i>

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for tuning unisons aurally	<p>1.1. OHS requirements, legislative requirements and workplace practices relevant to repairing pianos are verified and complied with.</p> <p>1.2. Customer requirements are received, analysed and confirmed with appropriate personnel.</p> <p>1.3. Communication with others involved with the work is established and maintained to ensure efficient workflow, coordination, personnel cooperation and safety throughout the application of this competency.</p> <p>1.4. Written instructions are followed.</p>
2. Prepare to tune unisons	<p>2.1. Tools and equipment are selected consistent with the needs of the job.</p> <p>2.2. Selected tools and equipment are checked for service ability and safety and any faults repaired and reported according to workplace practices</p> <p>2.3. Personal protective equipment is correctly fitted and used</p>
3. Set a string	<p>3.1. Correct posture for tuning is demonstrated, which minimizes fatigue and promotes muscular control.</p> <p>3.2. Tune the fundamental string aurally to a pitch standard</p> <p>3.3. Given an external pitch standard, match frequency of one string to that pitch to within $\pm .5$ cent.</p> <p>3.4. Tuned string is stabilised using correct hammer techniques</p>
4. Tune an adjacent string in unison to the fundamental string	<p>4.1. Adjust pitch of unison string to fundamental string, employing stabilisation techniques, to a beatless condition.</p> <p>4.2. Remaining strings are tuned according to above process.</p>
5. Clean up work area	<p>5.1. All tools, materials and other equipment are checked, cleaned and returned to their appropriate location.</p> <p>5.2. Work area is cleared and waste removed</p> <p>5.3. Workplace documentation is completed and filed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- ask questions to gain information from customer on tuning requirements
- work with customer to determine tuning requirements
- identify, diagnose and rectify faults, particularly if false string or stability problems exist
- assess and take appropriate action to minimize risks
- plan work requirements for self and others to meet tuning schedules
- plan own time to achieve outcomes
- research and apply new techniques in aural tuning
- use pitch standard to set fundamental string

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for tuning pianos
- organisational and site standards, requirements, policies and procedures for tuning pianos
- reading and interpreting workplace documents including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types, characteristics, uses, limitations and preparation of materials and equipment used in piano tuning
- types of tools and equipment used to regulate actions, keys and pedals and procedures for their safe use, operation and maintenance
- problem identification and resolution
- set up and operation of tools and equipment used for tuning pianos
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks to tune unisons aurally on upright and grand pianos
- Identify tools and equipment used in unison tuning
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Tune a minimum of two unisons aurally on both upright and grand pianos
- Modify activities to cater for variations in workplace contexts and environment
- Communicate and work with others in the work area
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Clean tools, equipment and work area
- Maintain and repair a range of hand and power tools used in piano regulation and repair
- Apply OHS practices when using hand and power tools, holding and support equipment, products and materials, including use of personal protective equipment

Context of and specific resources for assessment

Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements

Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.

The following resources should be made available:

- hand and power tools used in the tuning and repair of pianos
- materials used in the tuning and repair of pianos
- safety and personal protective equipment
- holding and supporting equipment
- workplace location or simulated workplace

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • upright and grand pianos
Method of assessment	<p>Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:</p> <ul style="list-style-type: none"> • organising work • completing tasks according to instructions • working systematically with attention to detail • identifying improvements and avoiding damage • using workplace practices • using OHS practices • assessing operational readiness of tools and equipment • recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions <p>Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit</p> <p>Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
OHS requirements may include:	Relevant Federal, State or Territory OHS legislation, regulations, standards and codes of practice, and workplace policies and procedures including the use of personal protection equipment, hazard and risk control and manual handling.
Legislative requirements may include:	Relevant Federal, State or Territory legislation including award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, industry codes of practice.
Workplace practices may include:	Site guidelines, policies and procedures relating to own role, quality assurance, procedural manuals, tool manufacturer's recommendations, ethical standards, recording and reporting, equipment use, maintenance and storage, environmental management (waste disposal, recycling, re-use).
Tools and equipment may include:	<ul style="list-style-type: none"> • pitch standard • tuning lever/hammer • temperament strip • mutes and wedges • tip wrench • tuning tips and heads
Personal protective equipment may include:	Safety glasses, goggles, hearing protection, safety footwear, protective clothing, gloves, respiratory protection

RANGE STATEMENT	
Correct posture may include:	<ul style="list-style-type: none"> • Standing or seating, according to type of piano and height of individual • Even distribution of body weight between both feet while standing, to reduce fatigue • Rest arm where available to aid control during tuning and reduce tiredness
Definitions	<ul style="list-style-type: none"> • <i>Aurally</i> is the ability to hear differences in frequency between strings within $\hat{A}\pm .5$ cent without the aid of an electronic device where the fundamentals are matching with no audible interfering patterns • The <i>Fundamental String</i> is the first string of a given note that is tuned to an external pitch standard. • The <i>Adjacent String</i> is the string closest to fundamental string. • In a <i>Bicord</i>, the string selected can be either side of the Fundamental, while in a <i>Tricord</i>, three adjacent strings are tuned. • <i>Beatless Condition</i> is where two strings are at the same frequency.
Pitch standard may include:	<ul style="list-style-type: none"> • piano • electronic keyboard • electronic tuning device (etd) • tuning fork
Hammer techniques may include:	<ul style="list-style-type: none"> • selection of tuning tip and angle • jerking movements • positioning hammer on pin at correct angle to avoid bending of tuning pin
Stabilisation techniques may include:	<ul style="list-style-type: none"> • use of firm key blows in conjunction with placement of pin • calculation of string stretch
Workplace documentation may include:	Time sheets, customer cards, work orders including job sheets, cutting lists, plans, drawings and designs, tool maintenance records and schedules

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPT3012A Tune octaves aurally to appropriate stretch

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to tune octaves aurally so they achieve an even and accurate pitch.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to use an external pitch standard to tune an octave aurally to appropriate stretch, then continue to tune strings while using hammer and stabilisation techniques.</p> <p>The unit applies in a workplace and on-site environment and may be conducted in a small to large scale enterprises.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select tools and equipment	<p>1.1. OHS requirements, legislative requirements and workplace practices relevant to repairing pianos are verified and complied with.</p> <p>1.2. Customer requirements are received, analysed and confirmed with appropriate personnel.</p> <p>1.3. Communication with others involved with the work is established and maintained to ensure efficient workflow, co-ordination, personnel co-operation and safety throughout the application of this competency.</p> <p>1.4. Written instructions are followed.</p>
2. Prepare to tune octaves	<p>2.1. Tools and equipment are selected consistent with the needs of the job.</p> <p>2.2. Selected tools and equipment are checked for service ability and safety and any faults repaired and reported according to workplace practices</p> <p>2.3. Personal protective equipment is correctly fitted and used</p>
3. Tune the fundamental string aurally to a pitch standard	<p>3.1. Correct posture for tuning is demonstrated, which minimizes fatigue and promotes muscular control</p> <p>3.2. Given an external pitch standard, match frequency of one string to that pitch to within $\pm .5$ cent</p> <p>3.3. Tuned string is stabilised using hammer techniques</p>
4. Match frequency of a string 1 octave above or below pitch standard	<p>4.1. Pitch of string/octave is adjusted above or below pitch standard.</p> <p>4.2. Stabilisation techniques are utilised.</p> <p>4.3. 4th and 5th intervals are used to establish the highest or lowest beatless condition.</p> <p>4.4. Overtone of primary note must match fundamental octave up, or fundamental of primary note must match the 1st octave of one overtone lower.</p> <p>4.5. 10th, double octaves and minor 7th checks are used.</p> <p>4.6. Intervals going up and down are tested to ensure tuning meets industry standards</p> <p>4.7. Remaining octaves are tuned according to the above process.</p>
5. Clean up work area	<p>5.1. All tools, materials and other equipment are checked, cleaned and returned to their appropriate location.</p> <p>5.2. Work area is cleared and waste removed</p> <p>5.3. Workplace documentation is completed and filed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- ask questions to gain information from customer on tuning requirements
- work with customer to determine tuning requirements
- reinterpret customer statements of problems into solution
- participate in activities to initiate new ideas and suggest improvements to work practices
- participate in continuous improvement processes
- manage own time to complete tuning and repair against set deadlines, especially where piano is required for performances
- apply reflective skills
- use technology relevant to tuning pianos

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for tuning pianos
- organisational and site standards, requirements, policies and procedures for tuning pianos
- reading and interpreting workplace documents including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types, characteristics, uses, limitations and preparation of materials and equipment used in piano tuning
- types of tools and equipment used to regulate actions, keys and pedals and procedures for their safe use, operation and maintenance
- problem identification and resolution
- set up and operation of tools and equipment used for tuning pianos
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks to tune octaves aurally on upright and grand pianos
- Identify tools and equipment used in octave tuning
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Tune a minimum of two octaves aurally on both upright and grand pianos
- Modify activities to cater for variations in workplace contexts and environment
- Communicate and work with others in the work area
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Clean tools, equipment and work area
- Maintain and repair a range of hand and power tools used in piano regulation and repair
- Apply OHS practices when using hand and power tools, holding and support equipment, products and materials, including use of personal protective equipment

Context of and specific resources for assessment

Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements

Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.

The following resources should be made available:

- hand and power tools used in the tuning and repair of pianos
- materials used in the tuning and repair of pianos
- safety and personal protective equipment
- holding and supporting equipment
- workplace location or simulated workplace

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • upright and grand pianos
Method of assessment	<p>Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:</p> <ul style="list-style-type: none"> • organising work • completing tasks according to instructions • working systematically with attention to detail • identifying improvements and avoiding damage • using workplace practices • using OHS practices • assessing operational readiness of tools and equipment • recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions <p>Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit</p> <p>Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
OHS requirements may include:	Relevant Federal, State or Territory OHS legislation, regulations, standards and codes of practice, and workplace policies and procedures including the use of personal protection equipment, hazard and risk control and manual handling.
Legislative requirements may include:	Relevant Federal, State or Territory legislation including award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, industry codes of practice.
Workplace practices may include:	Site guidelines, policies and procedures relating to own role, quality assurance, procedural manuals, tool manufacturer recommendations, ethical standards, recording and reporting, equipment use, maintenance and storage, environmental management (waste disposal, recycling, re-use).
Tools and equipment may include:	<ul style="list-style-type: none"> • pitch standard • tuning lever/hammer • temperament strip • mutes and wedges • tip wrench • tuning tips and heads
Personal protective equipment may include:	Safety glasses, goggles, hearing protection, safety footwear, protective clothing, gloves, respiratory protection

RANGE STATEMENT	
Correct posture may include	<ul style="list-style-type: none"> • Standing or seating, according to type of piano and height of individual • Even distribution of body weight between both feet while standing, to reduce fatigue • Rest arm where available to aid control during tuning and reduce tiredness
Definitions	<ul style="list-style-type: none"> • <i>Aurally</i> is the ability to hear differences in frequency between strings within $\hat{A}\pm .5$ cent without the aid of an electronic device where the fundamentals are matching with no audible interfering patterns • The <i>Fundamental String</i> is the first string of a given note that is tuned to an external pitch standard. • The <i>Adjacent String</i> is the string closest to fundamental string. • In a <i>Bicord</i>, the string selected can be either side of the Fundamental, while in a <i>Tricord</i>, three adjacent strings are tuned. • <i>Beatless Condition</i> is where two strings are at the same frequency.
Pitch standard may include:	<ul style="list-style-type: none"> • piano • electronic keyboard • electronic tuning device (etd) • tuning fork
Hammer techniques may include:	<ul style="list-style-type: none"> • selection of tuning tip and angle • jerking movements • positioning hammer on pin at correct angle to avoid bending of tuning pin
Stabilisation techniques may include:	<ul style="list-style-type: none"> • use of firm key blows in conjunction with placement of pin calculation of string stretch
Workplace documentation may include:	Time sheets, customer cards, work orders including job sheets, cutting lists, plans, drawings and designs, tool maintenance records and schedules

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPT3013A Tune a temperament octave to produce an equally tempered scale

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to tune temperaments on both upright and grand pianos.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to tune a temperament octave to produce an equally tempered scale and may involve the use of a pitch standard to establish the start note.</p> <p>The unit applies in a workplace and on-site environment and may be conducted in small to large scale enterprises.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for tuning temperaments	<p>1.1. OHS requirements, legislative requirements and workplace practices relevant to repairing pianos are verified and complied with.</p> <p>1.2. Customer requirements are received, analysed and confirmed with appropriate personnel.</p> <p>1.3. Communication with others involved with the work is established and maintained to ensure efficient workflow, coordination, personnel cooperation and safety throughout the application of this competency.</p> <p>1.4. Written instructions are followed.</p>
2. Prepare to tune temperaments	<p>2.1. Tools and equipment are selected consistent with the needs of the job.</p> <p>2.2. Selected tools and equipment are checked for service ability and safety and any faults repaired and reported according to workplace practices.</p> <p>2.3. Personal protective equipment is correctly fitted and used.</p>
3. Tune temperament	<p>3.1. Correct posture for tuning is demonstrated, which minimizes fatigue and promotes muscular control.</p> <p>3.2. Start note in temperament octave is tuned from established pitch reference.</p> <p>3.3. Temperament octave is tuned using the 4th and 5th cycle, following a set order of notes.</p> <p>3.4. Correct positions are confirmed using the 3rd and 6th checks individually and chromatically.</p>
4. Clean up work area	<p>4.1. All tools, materials and other equipment are checked, cleaned and returned to their appropriate location.</p> <p>4.2. Work area is cleared and waste removed</p> <p>4.3. Workplace documentation is completed and filed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- ask questions to gain information from customer on tuning requirements
- work with customer to determine tuning requirements
- re-interpret customer statements of problems into solution
- participate in activities to initiate new ideas and suggest improvements to work practices
- participate in continuous improvement processes
- manage own time to complete tuning and repair against set deadlines, especially where piano is required for performances
- apply reflective skills
- use technology relevant to tuning pianos

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for tuning pianos
- organisational and site standards, requirements, policies and procedures for tuning pianos
- reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types, characteristics, uses, limitations and preparation of materials and equipment used in piano tuning
- types of tools and equipment used to regulate actions, keys and pedals and procedures for their safe use, operation and maintenance
- problem identification and resolution
- set up and operation of tools and equipment used for tuning pianos
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks to tune temperament octaves on upright and grand pianos
- Identify tools and equipment used in temperament octave tuning
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Tune a minimum of two temperament octaves to produce an equally tempered scale on both upright and grand pianos
- Modify activities to cater for variations in workplace contexts and environment
- Communicate and work with others in the work area
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Clean tools, equipment and work area
- Maintain and repair a range of hand and power tools used in piano regulation and repair
- Apply OHS practices when using hand and power tools, holding and support equipment, products and materials, including use of personal protective equipment

Context of and specific resources for assessment

Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements

Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.

The following resources should be made available:

- hand and power tools used in the tuning of pianos
- materials used in the tuning of pianos
- safety and personal protective equipment
- holding and supporting equipment

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • workplace location or simulated workplace • upright and grand pianos
Method of assessment	<p>Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:</p> <ul style="list-style-type: none"> • organising work • completing tasks according to instructions • working systematically with attention to detail • identifying improvements and avoiding damage • using workplace practices • using OHS practices • assessing operational readiness of tools and equipment • recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions <p>Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit</p> <p>Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
OHS requirements may include:	Relevant Federal, State or Territory OHS legislation, regulations, standards and codes of practice, and workplace policies and procedures including the use of personal protection equipment, hazard and risk control and manual handling.
Legislative requirements may include:	Relevant Federal, State or Territory legislation including award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, industry codes of practice.
Workplace practices may include:	Site guidelines, policies and procedures relating to own role, quality assurance, procedural manuals, tool manufacturer's recommendations, ethical standards, recording and reporting, equipment use, maintenance and storage, environmental management (waste disposal, recycling, re-use).
Tools and equipment may include	<ul style="list-style-type: none"> • pitch standard • tuning lever/hammer • temperament strip • mutes and wedges • tip wrench • tuning tips and heads
Personal protective equipment may include:	Safety glasses, goggles, hearing protection, safety footwear, protective clothing, gloves, respiratory protection

RANGE STATEMENT	
Correct posture may include	<ul style="list-style-type: none"> • Standing or seating, according to type of piano and height of individual • Even distribution of body weight between both feet while standing, to reduce fatigue • Rest arm where available to aid control during tuning and reduce tiredness
Start note may include	<ul style="list-style-type: none"> • the note in the temperament octave that corresponds to the note tuned from the pitch standard.
Pitch reference may refer to	<ul style="list-style-type: none"> • the first note tuned on piano from pitch standard generally accepted as being A49/C52 or corresponding notes one octave below, which are A37/C40.
Temperament octave may include	<ul style="list-style-type: none"> • notes F 33 through to F 45, with some temperaments spread over 1 ½ octaves.
Workplace documentation may include:	Time sheets, customer cards, work orders including job sheets, cutting lists, plans, drawings and designs, tool maintenance records and schedules

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFPT3014A Tune a piano aurally and_or electronically within time and accuracy constraints

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to tune an upright and grand piano to a set level of accuracy within a specified timeframe.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to develop a level of accuracy using either aural or electronic tuning devices to tune a piano within time and accuracy constraints. Electronic Tuning Devices (ETD) may include computer software or a hardware device.</p> <p>The unit applies in a workplace and onsite environment, and may be conducted in a small to large scale enterprise.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		
	<i>LMFPT3007A</i>	<i>Regulate actions, keys and pedals of grand pianos</i>
	<i>LMFPT3008A</i>	<i>Understand piano tuning theory and basic acoustics</i>
	<i>LMFPT3009A</i>	<i>Develop control of tuning hammers</i>

Prerequisite units		
	<i>LMFPT3010A</i>	<i>Pitch raise</i>

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for tuning a upright or grand piano	<p>1.1. OHS requirements, legislative requirements and workplace practices relevant to repairing pianos are verified and complied with.</p> <p>1.2. Customer requirements are received, analysed and confirmed with appropriate personnel.</p> <p>1.3. Communication with others involved with the work is established and maintained to ensure efficient workflow, coordination, personnel cooperation and safety throughout the application of this competency.</p> <p>1.4. Written instructions are followed.</p>
2. Prepare to tune a upright or grand piano	<p>2.1. Tools and equipment are selected consistent with the needs of the job.</p> <p>2.2. Selected tools and equipment are checked for service ability and safety and any faults repaired and reported according to workplace practices</p> <p>2.3. Personal protective equipment is correctly fitted and used</p>
3. Dismantle piano	<p>3.1. Procedure for dismantling piano is determined.</p> <p>3.2. Piano is dismantled to allow access to internal components during the tuning process.</p> <p>3.3. Correct OHS procedures are followed throughout dismantling process.</p> <p>3.4. Safe storage of all piano parts while tuning is demonstrated.</p>
4. Tune piano	<p>4.1. Correct posture for tuning is demonstrated, which minimizes fatigue and promotes muscular control</p> <p>4.2. Start note is tuned accurately to a pitch standard.</p> <p>4.3. Temperament octave F33-F45 is tuned to desired standard.</p> <p>4.4. Octaves and unisons are tuned to desired standard in accordance with customer specifications.</p> <p>4.5. Interval checks are used to assess accuracy throughout tuning process</p> <p>4.6. Stable tuning is achieved in an industry acceptable timeframe without damage to the piano components</p>
5. Reassemble piano	<p>5.1. Case parts are identified and placed for reassembly.</p> <p>5.2. Case parts are reassembled according to workplace practices.</p> <p>5.3. Correct OHS practices are followed throughout</p>

ELEMENT	PERFORMANCE CRITERIA
	assembly process
6. Clean up work area	6.1. All tools, materials and other equipment are checked, cleaned and returned to their appropriate location. 6.2. Work area is cleared and waste removed 6.3. <i>Workplace documentation</i> is completed and filed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- ask questions to gain information
- communicate ideas and information to enable confirmation of work requirements, plans and specifications, coordination of work with other workers and customer, and report of work outcomes and problems
- apply effective listening techniques
- complete written documents, job cards, forms, timesheets and quotations
- work with others and in a team to assess tuning requirements
- work with customer to determine their tuning requirements
- identify team performance required to meet customer needs
- reinterpret customer statements of problems into solution
- resolve conflict through negotiation to ensure customer is happy with sound of piano
- determine opportunities to improve processes
- plan and organize activities to avoid any backtracking, workflow interruptions, re-work or wastage, including preparation and layout of the worksite and selection of tools and equipment
- participate in continuous improvement processes
- manage own time to complete tuning and repair against set deadlines, especially where piano is required for performances
- use feedback from customer to improve work performance in tuning
- take responsibility and display confidence in own ideas
- prioritise own work to meet customer requirements regarding completion time
- manage own work performance to:
 - follow OHS and workplace practices
 - plan and organize work schedules and routines
 - maintain required production output
 - assess quality of own work
- assess own skills and knowledge
- be open to learning and accommodate change
- apply reflective skills
- use workplace technology related to piano technology, including specified tools, equipment, calculators and measuring devices for piano tuning
- use technology relevant to tuning pianos

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice

REQUIRED SKILLS AND KNOWLEDGE

- relevant to the full range of processes for tuning pianos
- organisational and site standards, requirements, policies and procedures for tuning pianos
- reading and interpreting workplace documents including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- types, characteristics, uses, limitations and preparation of materials and equipment used in piano tuning
- types of tools and equipment used to tune pianos and procedures for their safe use, operation and maintenance
- problem identification and resolution
- set up and operation of tools and equipment used for tuning pianos
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks to tune both upright and grand pianos aurally and/or electronically
- Identify tools and equipment used in piano tuning
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Tune a minimum of two pianos aurally and/or electronically within industry specified time and accuracy constraints, on both upright and grand pianos
- Modify activities to cater for variations in workplace contexts and environment
- Communicate and work with others in the work area
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Clean tools, equipment and work area
- Maintain and repair a range of hand and power tools used in piano tuning
- Apply OHS practices when using hand and power tools, holding and support equipment, products and materials, including use of personal protective equipment

Context of and specific resources for assessment

Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements

Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.

The following resources should be made available:

- hand and power tools used in the tuning of pianos
- materials used in the tuning of pianos
- safety and personal protective equipment
- holding and supporting equipment

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • workplace location or simulated workplace • upright and grand pianos
Method of assessment	<p>Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:</p> <ul style="list-style-type: none"> • organising work • completing tasks according to instructions • working systematically with attention to detail • identifying improvements and avoiding damage • using workplace practices • using OHS practices • assessing operational readiness of tools and equipment • recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions <p>Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit</p> <p>Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
OHS requirements may include:	Relevant Federal, State or Territory OHS legislation, regulations, standards and codes of practice, and workplace policies and procedures, including the use of personal protection equipment, hazard and risk control and manual handling
Legislative requirements may include:	Relevant Federal, State or Territory legislation, including award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, industry codes of practice.
Workplace practices may include:	Site guidelines, policies and procedures relating to own role, quality assurance, procedural manuals, tool manufacturer recommendations, ethical standards, recording and reporting, equipment use, maintenance and storage, environmental management (waste disposal, recycling, re-use).
Customer requirements may include	<ul style="list-style-type: none"> • level of playing required, such as <ul style="list-style-type: none"> • standard of pianist • time piano is used • environment • location of piano • pitch requirements • budget
Tools and equipment may include	<ul style="list-style-type: none"> • pitch standard • tuning lever/hammer • temperament strip

RANGE STATEMENT	
	<ul style="list-style-type: none"> • mutes and wedges • tip wrench • tuning tips and heads
Personal protective equipment may include:	Safety glasses, goggles, hearing protection, safety footwear, protective clothing, gloves, respiratory protection
Procedure for dismantling piano may be:	<ul style="list-style-type: none"> • Upright <ul style="list-style-type: none"> • removal of top front board and fall board • lift lid • Grand <ul style="list-style-type: none"> • removal of fall board and music disk • lift lid
Correct posture may include:	<ul style="list-style-type: none"> • Standing or seating, according to type of piano and height of individual • Even distribution of body weight between both feet while standing, to reduce fatigue • Rest arm where available to aid control during tuning and reduce tiredness
Start note may include:	<ul style="list-style-type: none"> • the note in the temperament octave that corresponds to the note tuned from the pitch standard. • the first note tuned on piano from pitch standard generally accepted as being A49/C52 or corresponding notes one octave below, which are A37/C40.
Pitch standard may include:	<ul style="list-style-type: none"> • piano • electronic keyboard • Electronic Tuning Device (ETD) • tuning Fork
Interval checks may include:	<ul style="list-style-type: none"> • thirds, fourths, fifths, sixths, sevenths and tenths
Industry acceptable timeframe may be:	<ul style="list-style-type: none"> • up to 2 hours.
Damage to the piano components may include:	<ul style="list-style-type: none"> • bent tuning pins • broken strings • elongated tuning pin holes • damaged bearings
OHS practices may include:	<ul style="list-style-type: none"> • hazard identification and control, risk assessment and implementation of risk

RANGE STATEMENT	
	<p>reduction measures specific to the tasks described by this unit, and may relate to:</p> <ul style="list-style-type: none"> • manual handling techniques • standard operating procedures • personal protective equipment • safe materials handling • taking of rest breaks • ergonomic arrangement of workplaces • following marked walkways • safe storage of equipment • housekeeping • reporting accidents and incidents • environmental practices
Workplace documentation may include:	Time sheets, customer cards, work orders including job sheets, cutting lists, plans, drawings and designs, tool maintenance records and schedules

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFPT3015A Voice a piano

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to voice a piano to change the tone from harsh to soft or soft to harsh and make the tone even after tuning.
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Application of the Unit

Application of the unit	<p>This unit applies to the skills and knowledge required to voice a piano and may include needling, reshaping and hardening hammers to change the tone from harsh to soft or soft to harsh and to make the tone even after tuning.</p> <p>The unit applies in a workplace and on-site environment and may be conducted in small to large scale enterprises.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for voicing a piano	<p>1.1. OHS requirements, legislative requirements and workplace practices relevant to voicing pianos are verified and complied with.</p> <p>1.2. Customer requirements are received, analysed and confirmed with appropriate personnel.</p> <p>1.3. Communication with others involved with the work is established and maintained to ensure efficient workflow, coordination, personnel cooperation and safety throughout the application of this competency.</p>
2. Prepare for voicing a piano	<p>2.1. Tools, equipment and materials are selected consistent with the needs of the job.</p> <p>2.2. Selected tools and equipment are checked for service ability and safety and any faults repaired and reported according to workplace practices</p> <p>2.3. Personal protective equipment is correctly fitted and used</p> <p>2.4. Piano is tuned and regulated to industry standards and customer requirements before voicing is commenced</p>
3. Voice a piano	<p>3.1. Correct posture for tuning is demonstrated, which minimizes fatigue and promotes muscular control</p> <p>3.2. Undesirable tonal qualities are identified, using customer requirements</p> <p>3.3. Surface felt is reshaped to ensure a clean and square striking surface.</p> <p>3.4. Hammers are needled, as required, to achieve particular tonal effects and to balance tonal response.</p> <p>3.5. Hammers are reshaped after needling to ensure correct shape and surface texture</p> <p>3.6. Hammers are ironed or hardened as necessary</p> <p>3.7. Final tonal quality is assessed against customer requirements, and any adjustments made.</p>
4. Clean up work area	<p>4.1. All tools, materials and other equipment are checked, cleaned and returned to their appropriate location.</p> <p>4.2. Work area is cleared and waste removed</p> <p>4.3. Workplace documentation is completed and filed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communicate ideas and information to enable confirmation of work requirements, plans and specifications, coordination of work with other workers and customer, and report of work outcomes and problems
- work with customer to assess voicing requirements
- identify team performance required to meet customer needs
- re-interpret customer statements of problems into solution
- collect and monitor information to identify trends that may require remedial action
- plan and organize activities to avoid any backtracking, workflow interruptions, re-work or wastage, including preparation and layout of the worksite and selection of tools and equipment
- manage own work performance to:
 - follow OHS and workplace practices
 - plan and organize work schedules and routines
 - maintain required production output
 - assess quality of own work
- modify activities to cater for variations in workplace contexts and environment when tuning pianos
- use workplace technology related to piano technology, including specified tools, equipment, calculators and measuring devices for piano tuning

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for tuning and voicing pianos
- organisational and site standards, requirements, policies and procedures for tuning and voicing pianos
- reading and interpreting workplace documents, including work orders, work instructions and operator instructions
- environmental protection requirements relating to the disposal of waste material
- established lines of communication and protocols
- knowledge of piano tuning and regulation methodologies
- types, characteristics, uses, limitations and preparation of materials and equipment used in piano tuning and voicing
- types of tools and equipment used to tune and voice pianos and procedures for their safe use, operation and maintenance
- problem identification and resolution
- set up and operation of tools and equipment used for tuning pianos
- storage systems and labelling

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Interpret work order, locate materials and use information to complete tasks to voice both upright and grand pianos
- Identify tools and equipment used in piano voicing
- Select, set up and maintain equipment in accordance with manufacturer specifications and workplace practices
- Voice a minimum of two upright and grand pianos
- Modify activities to cater for variations in workplace contexts and environment
- Communicate and work with others in the work area
- Apply safe handling practices and safe operating procedures for equipment, products and materials to:
 - minimise the risk of injury to self or others
 - prevent damage to goods, equipment and products
- Clean tools, equipment and work area
- Maintain and repair a range of hand and power tools used in piano voicing
- Apply OHS practices when using hand and power tools, holding and support equipment, products and materials, including use of personal protective equipment

Context of and specific resources for assessment

Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements

Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.

The following resources should be made available:

- hand and power tools used in the voicing of pianos
- materials used in the voicing of pianos
- safety and personal protective equipment
- holding and supporting equipment
- workplace location or simulated workplace
- upright and grand pianos

EVIDENCE GUIDE**Method of assessment**

Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:

- organising work
- completing tasks according to instructions
- working systematically with attention to detail
- identifying improvements and avoiding damage
- using workplace practices
- using OHS practices
- assessing operational readiness of tools and equipment
- recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions

Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit

Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
OHS requirements may include:	Relevant Federal, State or Territory OHS legislation, regulations, standards and codes of practice, and workplace policies and procedures, including the use of personal protection equipment, hazard and risk control and manual handling
Legislative requirements may include:	Relevant Federal, State or Territory legislation, including award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, industry codes of practice.
Workplace practices may include:	Site guidelines, policies and procedures relating to own role, quality assurance, procedural manuals, tool manufacturer recommendations, ethical standards, recording and reporting, equipment use, maintenance and storage, environmental management (waste disposal, recycling, re-use).
Tools, equipment and materials may include:	<ul style="list-style-type: none"> screwdrivers, voicing needles, voicing tools and blocks, hammer iron, lacquer and brush, sandpaper, hammer lifting tool, tuning wedge, string level tool, string lifting tool
Personal Protective Equipment may include:	<ul style="list-style-type: none"> safety glasses, goggles, hearing protection, safety footwear, protective clothing, gloves, respiratory protection.
Correct posture may include:	<ul style="list-style-type: none"> standing or seating, according to type of piano and height of individual even distribution of body weight between both feet while standing, to reduce fatigue

RANGE STATEMENT	
	<ul style="list-style-type: none"> rest arm where available to aid control during tuning and reduce tiredness
Undesirable tonal qualities may include:	<ul style="list-style-type: none"> harsh/soft noise which may occur when you have a loose hammer head, loose centre pins or uneven level strings. string noises false strings - string has its own beat nasal or metallic sound due to hard hammers
Needling techniques may include:	<ul style="list-style-type: none"> correct method of supporting the hammers to avoid damage to action centres selecting the appropriate needling zones to achieve particular tonal effects
Hardening process may include:	<ul style="list-style-type: none"> lacquers, irons and collodian
Workplace documentation may include:	<ul style="list-style-type: none"> time sheets, customer cards, work orders including job sheets, cutting lists, plans, drawings and designs, tool maintenance records and schedules

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFPT3016A Provide advice to customers on piano tuning and repair

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the skills and knowledge required to provide advice to customers regarding the repair and tuning of pianos.
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Application of the Unit

Application of the unit	This unit applies to the skills and knowledge required to assess a piano for the tuning requirements and identify any faults and repairs before providing advice to customers. The unit applies in a workplace and on-site environment and may be conducted in small to large enterprises.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for work	<p>1.1. OHS requirements, legislative requirements and workplace practices relevant to tuning and repairing pianos are verified and complied with.</p> <p>1.2. Customer requirements regarding suitable time and date for appointment are received and confirmed with appropriate personnel.</p> <p>1.3. Communication with others involved with the work is established and maintained to ensure efficient workflow, co-ordination, personnel co-operation and safety throughout the application of this competency.</p> <p>1.4. Written instructions are followed.</p> <p>1.5. OHS practices are adhered to throughout the work</p>
2. Identify customer requirements	<p>2.1. Questioning and active listening techniques are used to clarify customer requirements.</p> <p>2.2. Feedback is provided to customer to ensure correct interpretation of requirements.</p>
3. Assess piano for faults and relevant repairs	<p>3.1. Piano case parts are removed and stored safely away from the instrument.</p> <p>3.2. Faults are identified and recorded according to workplace practices.</p> <p>3.3. Appropriate repairs required to rectify faults are determined.</p> <p>3.4. Piano case parts are reassembled according to workplace practices.</p> <p>3.5. Work area is cleared and waste removed.</p> <p>3.6. Workplace documentation is completed.</p>
4. Assess piano tuning requirements	<p>4.1. Frequency of tuning is determined, based on industry recommendations.</p> <p>4.2. Customer is advised on environmental conditions which may affect tuning stability.</p>
5. Provide customer with recommendations	<p>5.1. Customer is advised both verbally and in writing of recommendations regarding tuning and repair of piano.</p> <p>5.2. Customer is given options regarding priority of repairs, so they can give an informed decision.</p> <p>5.3. Options regarding materials used in repairs are explained to, and discussed with the customer to facilitate customer understanding of available</p>

ELEMENT	PERFORMANCE CRITERIA
	products and services.
6. Present quotation to customer	<p>6.1. <i>Quotation</i> is prepared for the tuning and repair of piano including all <i>costs</i>.</p> <p>6.2. Customer is presented with quotation, which includes a breakdown of costs for all options for tuning and repair.</p> <p>6.3. Benefits of each option are explained to the customer to facilitate informed decision making.</p> <p>6.4. Customer commitment to agreed repairs and tuning is gained in accordance with workplace practices.</p> <p>6.5. Customer is informed of rights and obligations regarding product or service.</p>
7. Finalise process	<p>7.1. Documentation is completed and submitted to appropriate personnel following workplace practices.</p> <p>7.2. Contact is maintained with customer throughout the tuning and repair process.</p>

Required Skills and Knowledge

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to repairing, rebuilding and tuning pianos
- organisational and site standards, requirements, policies and procedures for providing advice to customers
- options available to customers for tuning and repairing pianos
- types, characteristics, uses, limitations and preparation of materials and equipment used in piano repair and manufacture
- problem identification and resolution
- strategies for planning and monitoring activities
- consultation methods, techniques and protocols
- terms used to describe components of pianos
- terms used to describe the processes involved in tuning and repair
- procedures for the recording, reporting and maintenance of workplace records and information
- mathematical techniques for estimation and measurement of materials

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Identify products and materials used in piano tuning, repair and rebuilding • Conducting meetings with customer to determine piano requirements • Assessing and reporting on customer satisfaction • Analysing sales and product development data • Completing workplace documentation • Advise customer on at least three occasions involving tuning, repair and rebuilding options for an upright and grand piano • Communicate and work with others in the work area
<p>Context of and specific resources for assessment</p>	<p>Assessment may occur on the job or in a simulated workplace environment in accordance with work practices and safety requirements</p> <p>Assessment is to occur under standard work practices, and to comply with legislative and regulatory requirements.</p> <p>The following resources should be made available:</p> <ul style="list-style-type: none"> • hand and power tools used in the repair and manufacture of pianos • materials used in the repair and manufacture of pianos • safety and personal protective equipment • holding and supporting equipment • workplace location or simulated workplace
<p>Method of assessment</p>	<p>Assessment must confirm consistency (over time and in a range of workplace relevant contexts) in application of skills and knowledge when:</p> <ul style="list-style-type: none"> • organising work • completing tasks according to instructions • working systematically with attention to detail • identifying improvements and avoiding damage • using workplace practices • using OHS practices • assessing operational readiness of tools and

EVIDENCE GUIDE

	<p>equipment</p> <ul style="list-style-type: none">• recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions <p>Assessment must include a variety of project or work activities that allow the candidate to demonstrate competency in the unit</p> <p>Assessment should be by direct observation of tasks and include questioning on required knowledge and skills to ensure correct interpretation and application.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency</p>
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Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
OHS requirements may include:	Relevant Federal, State or Territory OHS legislation, regulations, standards and codes of practice, and workplace policies and procedures, including the use of personal protection equipment, hazard and risk control and manual handling.
Legislative requirements may include:	Relevant Federal, State or Territory legislation, including award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, the environment, equal opportunity, anti-discrimination, industry codes of practice.
Workplace practices may include:	Site guidelines, policies and procedures relating to own role, quality assurance, procedural manuals, tool manufacturer's recommendations, ethical standards, recording and reporting, equipment use, maintenance and storage, environmental management (waste disposal, recycling, re-use).
OHS practices may include:	<p>Hazard identification and control, risk assessment and implementation of risk reduction measures specific to the tasks described by this unit, and may relate to:</p> <ul style="list-style-type: none"> • manual handling techniques • standard operating procedures • personal protective equipment • safe materials handling • taking of rest breaks • ergonomic arrangement of workplaces

RANGE STATEMENT	
	<ul style="list-style-type: none"> • following marked walkways • safe storage of equipment • housekeeping • reporting accidents and incidents • environmental practices
Active listening may include:	<ul style="list-style-type: none"> • maintaining eye contact, asking questions to clarify meaning
Feedback may include:	<ul style="list-style-type: none"> • verbal or written response
Faults may include:	<ul style="list-style-type: none"> • worn, loose or broken action parts or keyboards • worn or broken pedal systems • tuning instability • cracks or delamination of bridges, ribs and soundboards • case faults
Workplace documentation may include:	Time sheets, customer cards, work orders, including job sheets, cutting lists, plans, drawings and designs, tool maintenance records and schedules
Frequency of piano tuning may vary according to:	<ul style="list-style-type: none"> • condition and age of piano • amount of use of the piano • quality of the piano • internal and external humidity changes
Environmental conditions may include:	<ul style="list-style-type: none"> • piano position in home or other location • air conditioning and heating • seasonal temperature and humidity changes
Quotation may include:	<ul style="list-style-type: none"> • progressive listing of repair points in an orderly format • all costs • statement of warranty terms • statement of payment terms, including deposit • estimation of the time the instrument will be out of service
Costs may include:	<ul style="list-style-type: none"> • material used in repair • labour • travel expenses (if applicable) • shipping of parts or piano

Unit Sector(s)

Unit sector	Piano Technology
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF1001B Produce basic soft furnishing accessories

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to produce basic soft furnishing accessories such as basic cushions and other decorative items, following the requirements of patterns.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	1.1. Job requirements are identified from work instructions and patterns 1.2. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 1.3. Pattern is interpreted to determine tool, equipment and material requirements 1.4. Instructions for sequencing of work and particular measurements or adjustments are interpreted 1.5. Work sequence is planned, including quality checkpoints
2. Prepare for work	2.1. Suitable work area is selected for the tasks 2.2. Materials are selected to match customer requirements, suitability for the purpose and work instructions 2.3. Potential hazards are identified from observation of the tools, equipment, materials and workplace reference material 2.4. Required tools, equipment and materials are collected in the work area selected
3. Complete production	3.1. Soft furnishing accessories are produced following work instructions 3.2. Work is checked against patterns and work sheets at the identified checkpoints 3.3. Non-conformity with the required quality standards is rectified
4. Finalise operations	4.1. Completed work is checked against required quality standards 4.2. Documentation is completed following workplace procedures 4.3. Work area is cleaned, tools and equipment are returned to storage 4.4. Unused materials are returned to storage and waste and scrap are dealt with following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid back tracking
- work with others and in a team by recognising dependencies and using co-operative approaches
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- use workplace technology related to the production task, including specified tools, equipment, calculators and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of basic soft furnishing materials
- the interpretation of patterns
- identification of equipment, processes and procedures
- workflow in relation to soft furnishing accessory production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Apply safe handling practices for equipment, products and materials
- Identify materials used and any special sewing or handling requirements for those materials
- Interpret work order and locate and apply relevant information
- Interpret patterns and work instructions
- Produce at least one type of soft furniture accessory
- Select and use tools and equipment appropriate to the task
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment

Resource implications

Patterns, materials, tools and equipment.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the reading and interpreting of patterns, plans and instructions. This may be demonstrated either individually or in a team environment.
Soft furnishing accessories may include:	<ul style="list-style-type: none"> • basic cushions • bolsters • soft tableware and slip-on covers
Tools and equipment may include:	<ul style="list-style-type: none"> • measuring and calculating equipment, including tapes, rulers, calculators, computers • fabric and general cutting and sewing tools, including scissors, saws, drills, staplers, sewing machines, hemming machines, overlockers, glue guns
Materials may include:	<ul style="list-style-type: none"> • plain and patterned fabric • velvet • vinyl • piping cords • wadding • foam • zips and fasteners
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and

RANGE STATEMENT	
	enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the production of soft furnishing items • Work instructions, including job sheets, patterns, plans, drawings and designs • Workplace procedures relating to reporting and communication
Pattern interpretation	Pattern interpretation is to result in the determination of type of material specified, required tools and equipment for the task, number and type of soft furnishing accessories to be produced, and quality requirements

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF2001B Cut single layer fabrics

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to measure out and cut single layer fabrics.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan work operations	1.1. Required fabrics, number of items to be cut and required equipment are identified 1.2. Fabric sizes to be cut are identified from work order plus any required allowances 1.3. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work. 1.4. Suitable work area is selected, tidied and cleaned of any contaminants 1.5. Suitable scissors and or blades are selected and checked prior to use for appropriate sharpness, set, operation and safe condition 1.6. Fabrics are selected in accordance with work order and laid out smooth and square
2. Prepare materials for cutting	2.1. Fabrics are inspected for flaws and appropriate finish 2.2. Naps, direction, pattern matches and face of the materials are identified 2.3. Tools and equipment are checked for operation
3. Complete cutting operations	3.1. Cutting is completed with cut out materials identified/labelled where required 3.2. Any measurements for pleat lines, hems, headings and any special seam allowances are marked out using workplace approved methods 3.3. Where required, fabrics are hung using appropriate protective covers and care label information is attached 3.4. Cut lengths are dispatched to next process following workplace procedures 3.5. Unused materials are stored as required 3.6. Workplace required documentation is completed following appropriate procedures 3.7. Work area is cleaned and damaged tools tagged as required 3.8. Waste is collected and bundled for recycling/reuse as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate fabric requirements and other material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use the limited workplace technology related to cutting, including tools, equipment, calculators and measuring devices.

Required knowledge

- work requirements, including workplace standards
- fabric types, common faults and inspection procedures
- design features of the finished items in relation to attractive use of fabric patterns
- cutting equipment and techniques
- the impact of cutting on fabrics

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling practices for equipment, products and materials
- Identify materials used and any special marking out requirements
- Measure accurately and cut fabric quantities to minimise waste and produce consistent quality items for at least five different types of material or product
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Work orders, fabrics, including linings and interlinings, calculator and where available other workplace calculating and cutting equipment.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit applies to soft furnishings and upholstered items cut from measurements and instructions. It does not apply to cutting from patterns.
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment
Workplace environment	Work may be performed in workplaces which are involved in the manufacture of soft furnishings and upholstered furniture and in the repair and restoration of furnishing products
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • cutting equipment • including scissors and cutting machines; measuring and calculating equipment • including tapes • rulers • calculators and computers
Products to be constructed may include, but are not limited to:	<ul style="list-style-type: none"> • curtains • drapes • swags • cushions and upholstered furniture components

RANGE STATEMENT	
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF2002B Machine sew materials

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use sewing machines for production of soft furnishings, mattresses and bases, and upholstered furniture.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify sewing machine equipment controls and procedures	1.1. Job requirements are identified from work instructions 1.2. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 1.3. Equipment components, equipment condition and controls are identified 1.4. Operating procedures are checked to identify any approved adjustments 1.5. Equipment operations and production procedures are identified 1.6. The process for obtaining materials and moving products to the next process is identified
2. Prepare for work	2.1. Work order or sample is checked to identify sewing specifications 2.2. Required materials, tools and equipment are assembled 2.3. Materials and equipment are inspected and any faults are identified and reported 2.4. Work sequence is planned to suit job, and materials are laid out 2.5. If required, naps, pattern direction and face side of materials are identified 2.6. Components are matched and secured with tacking, pins or adhesives as required 2.7. Any required supplementary equipment is identified for routine lubrication and adjustments
3. Set up and control sewing machine operations	3.1. Sewing machine is set up and adjusted 3.2. Sewing operation is according to workplace procedures and material characteristics 3.3. Required product quality and outputs are maintained
4. Maintain quality requirements	4.1. Machining process is monitored and conditions which may affect work quality are reported 4.2. Authorised changes in operating procedures are implemented
5. Finish and dispatch work	5.1. Completed work is: <ul style="list-style-type: none"> 5.1.1. checked for required quality 5.1.2. finished as required 5.1.3. repaired (where applicable)

ELEMENT	PERFORMANCE CRITERIA
	5.1.4. moved to the next process 5.2. Material which is able to be reused is collected and stored 5.3. Equipment and work area clean up and waste management are completed following workplace procedures 5.4. Workplace records are completed as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate sewing problems, avoid re-working and wastage
- use the workplace technology related to the sewing of materials, including tools, equipment and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of sewing machines
- characteristics of materials used and finished products
- safety and environmental aspects of sewing machine operations
- quality systems and standards
- workflow requirements for sewing process
- operation of work systems and industrial sewing equipment
- causes of faults and repair methods
- procedure for reporting damaged or imperfect products or interruptions to workflow

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Apply safe handling practices for equipment, products and materials, including personal protective equipment
- Identify and operate three types of industrial sewing machines as identified in the Range of Variables
- Set up sewing machine for operations and monitor quality of output
- Interpret work order and locate and apply relevant information
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Identify safe handling of equipment, products and materials

Resource implications

Appropriate industrial sewing machines, work orders, operating procedures, materials and threads.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment

Sewing specifications include:

- required materials
- threads and additional work features
- seam and stitch specifications
- any special stitch requirements and allowances
- shape characteristics and special requirements
- needles
- attachments and ancillary equipment and quality requirements

Sewing products include:

- top stitching
- gathering
- piping
- braid
- fringe
- flange cords
- straight fabric lengths
- padded material
- loose covers

Sewing processes may include:

- hemming
- seams

RANGE STATEMENT	
	<ul style="list-style-type: none"> • machine tacking • gathering • multiple-layer sewing and straight or zig zag sewing
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • single or multi-needle flat bed • overlocker • blind hemming • gathering • flange • bar tacking • tape edging
Sewing machine set up and adjustment includes:	<ul style="list-style-type: none"> • thread machine and wind bobbin as required • set required tensions • select required machine settings • and test operations for work order requirements
Materials to be machined may include but are not limited to:	<ul style="list-style-type: none"> • plain and patterned fabrics
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • The employee completes quality inspection of own work

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF2003B Machine sew using specific techniques

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use specific sewing machine techniques, with attachments as required, to produce specialised sewn products.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify sewing machine equipment controls and procedures	1.1. Job requirements are identified from work instructions 1.2. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 1.3. Equipment operations, components and controls are identified 1.4. Operating procedures are checked to identify approved procedures and adjustments 1.5. Inspection procedure for materials quality and equipment condition is identified 1.6. The process for obtaining materials and moving products to the next process is identified
2. Prepare for work	2.1. Work order or sample is checked to identify exact sewing specification 2.2. Materials are inspected before use and problems, including any materials or part constructed products which do not meet the job order requirements are identified and reported 2.3. Work pieces are laid out in sequence in accordance with specifications and workplace procedures 2.4. Any required supplementary equipment is identified for routine lubrication and adjustments
3. Adjust and control sewing machine operations	3.1. Sewing machine (including attachments as required) set up requirements and adjustments are identified and followed 3.2. Machine sewing maintains required product quality and outputs 3.3. Material which is able to be reused is collected and stored, and waste and scrap is removed in accordance with workplace procedures 3.4. Equipment and work area clean up are completed following workplace procedures
4. Maintain quality requirements	4.1. Sewing machine operations and fabrics are monitored and anything which may affect quality is reported 4.2. Finished products are: <ul style="list-style-type: none"> 4.2.1. checked for required quality 4.2.2. repaired (where applicable)

ELEMENT	PERFORMANCE CRITERIA
	4.2.3. moved to the next process 4.3. Authorised changes in operating procedures and work requirements are implemented
5. Dispatch completed work	5.1. Production records and/or packing slips are completed in accordance with workplace procedures 5.2. Completed work is directed to the next operation in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate sewing problems, avoid re-working and wastage
- use the workplace technology related to the sewing, including tools, equipment, and measuring devices

Required knowledge

- types, characteristics, uses and limitations of sewing machines
- characteristics of materials used and finished products
- safety and environmental aspects of sewing machine operations
- quality systems and standards
- workflow requirements for sewing process
- operation of work systems and sewing equipment
- causes of faults and repair methods
- procedure for reporting damaged or imperfect products or interruption to workflow
- workplace procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Apply safe handling practices for equipment, products and materials
- To be assessed as competent in at least one of the following:
 - sewing decorative finishes (competence must be achieved in at least one finish)
 - sewing with specialised attachments (competence must be achieved in at least three attachments/processes)
 - sewing fasteners and attachments
 - operating an outline sewing machine
- Assessment must confirm appropriate knowledge and skills to:
 - identify and operate sewing machines
 - set up sewing machine for operations and monitor quality of output
 - interpret work order and locate and apply relevant information
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate sewing machine, work orders, operating procedures, materials and threads.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will

EVIDENCE GUIDE	
	generally be in conjunction with assessment of other units of competency.
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit covers work involving the operation of industrial sewing machines to produce specialised products in soft furnishing, upholstery and mattress and base making
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of machines
Sewing specifications include:	<ul style="list-style-type: none"> • required materials • threads • additional work features • shape and special requirements for the gathered item • any required workplace documentation to be completed
Specific and specialised techniques and products include:	<ul style="list-style-type: none"> • sewing decorative finishes, including: <ul style="list-style-type: none"> • patchwork and flat bed quilting • applique and freehand embroidery • top stitching • invisible zips • mitre corners • capping • sewing labels • sewing with specialised attachments,

RANGE STATEMENT	
	<p>including:</p> <ul style="list-style-type: none"> • rolled hems • ribboning • gathering • embroidery hoops • bias binding • sewing fasteners and attachments, including: <ul style="list-style-type: none"> • zips • hooks • rings • velcro • press studs • buttons • buttonholes • tapes and attachments appropriate for the furnishing industry • operating an outline sewing machine
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • flange • overlocker • flat bed • blind hemming • gathering • tape edging
Sewing machine set up and adjustment includes:	<ul style="list-style-type: none"> • threading machine and winding bobbin • setting required tensions • selecting required machine settings • lubricating and adjusting the machine (where required) and testing operations for work order requirements
Materials to be machined may include but are not limited to:	<ul style="list-style-type: none"> • fabrics and leathers
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF2004B Hand sew soft furnishings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to hand sew hems and shaped components, and hand finish work for soft furnishings.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify materials and sewing requirements	1.1. Required materials are identified from work order 1.2. Special requirements for the stitching, including stitch type, length and end finishing requirements are identified from work order
2. Assemble and organise materials to be sewn	2.1. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.2. Materials to be sewn are collected and inspected for appropriate quality 2.3. Naps, direction of pattern and face side of the materials are identified 2.4. Required shape or form of the finished item is made and secured using tacking stitches, pins, adhesives or fixtures to assist in sewing operations 2.5. Appropriate needle types are selected and threaded
3. Sew by hand	3.1. Materials are held to allow for sewing in the required direction 3.2. Hand sewing operations are completed to ensure finished components match work requirements
4. Finish work	4.1. Finished stitching, including sewn area, seam width, stitch length, end finishing, allowances, shape and finish are checked 4.2. Top stitching or other decorative features are checked for required finish 4.3. Where required, stitching or seams are eased and work is pressed for the next stage 4.4. Raw edges are trimmed and any loose or untrimmed threads are removed 4.5. Any part of the work which does not comply with work order is repaired 4.6. Problems are notified following workplace procedures
5. Complete work for next process	5.1. Finished work is folded, protected and dispatched to the next process following workplace procedures 5.2. Any required documentation is completed and stored following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate sewing problems, avoid re-working and wastage
- use the limited workplace technology related to the sewing, including tools, equipment and measuring devices

Required knowledge

- work requirements, including workplace standards
- identification of techniques and procedures for the sewing processes
- fabric types, common faults and inspection procedures
- methods to be used with different fabric types
- risks to health from repetitive actions and prevention strategies
- design features of the articles sewn in relation to the methods and stitches to be used

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Apply safe handling practices for equipment, products and materials
- Identify materials used and any special sewing requirements for the materials to be sewn
- Hand sew at least five different soft furnishing products or using five different techniques
- Interpret work order, copy samples and locate and apply relevant information
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment

Resource implications

Appropriate sewing equipment, fabrics, work order, workplace information, including work procedures.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment
<p>Purposes of hand sewing include:</p>	<ul style="list-style-type: none"> • sewing and manipulation requirements for hand sewing a range of upholstery and other furnishing fabrics • the joining of all types of fabrics, single or multi thickness, partly constructed materials, heavy materials, including leather • hemming, seams, tacking, button attachment, hand finishing of trims and decorations
<p>Tools and equipment may include:</p>	<ul style="list-style-type: none"> • a range of needles and threads
<p>Materials to be sewn may include but are not limited to:</p>	<ul style="list-style-type: none"> • plain and patterned fabrics for a variety of curtains • drapes and cushions • attachments • lining • interlining • webbings or padding
<p>Sewing direction is determined</p>	<ul style="list-style-type: none"> • stitch type and location • personal right- or left-hand preference of the

RANGE STATEMENT	
by:	sewer <ul style="list-style-type: none"> manipulation requirements for the bulk and slipperiness of the materials
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Hand sewing work requirements must ensure that:	<ul style="list-style-type: none"> beginning and end of stitching are secure appropriate allowances (or hem and/or other allowance), stitch type, length and visibility are used sewn area or hems are flat and/or appropriately shaped finished components match work requirements
Information and procedures	<ul style="list-style-type: none"> Machine manufacturer specifications and operational procedures Workplace procedures relating to the setting and operation of machinery Work instructions, including job sheets, plans, drawings and designs Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFSF2005B Operate a steam press

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to apply knowledge of materials, product purpose and processes to the operation of steam pressing equipment.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	1.1. Work orders, care labels, and equipment instructions are used to identify work requirements 1.2. Equipment, components and processes used for materials preparation and pressing process are identified 1.3. Operating requirements for the steam pressing equipment are identified 1.4. Workplace quality requirements for the final product are identified
2. Plan steam pressing operations	2.1. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.2. Temperatures and any particular precautions are identified from care labels and workplace instructions 2.3. Work sequence is planned to suit job 2.4. Equipment emergency stops, gauges, guards and controls are identified 2.5. Task sequences are planned
3. Set up steam pressing equipment	3.1. Equipment information, required specifications and operating instructions are identified 3.2. Temperatures are set and equipment adjustments are checked against work plan 3.3. Fabric panels are checked for quality prior to pressing 3.4. Damaged or incomplete items are reported
4. Press fabrics	4.1. Materials are lifted and held onto the press using appropriate techniques 4.2. Pressing operations are conducted following the planned sequence 4.3. Adjustments are made to press settings to improve quality of work 4.4. Required quantity and quality of work is maintained 4.5. Pressed items are protected from dust and other contaminants and placed in workplace approved holding areas 4.6. Equipment is cleaned up and lubrications, adjustments and waste management processes are completed in accordance with workplace procedures

ELEMENT	PERFORMANCE CRITERIA
5. Maintain work quality	5.1. Pressing process is monitored and materials and equipment operating conditions which may affect product quality are reported 5.2. Authorised changes in operating procedures and temperatures are implemented

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate steam pressing problems, avoid re-working and wastage
- use the workplace technology related to steam pressing, including pressing equipment and effects of pressing

Required knowledge

- the types, characteristics, uses and limitations of steam presses
- the operating controls and principles which effect the steam pressing equipment
- the effect of steam on the range of materials which may be pressed
- requirements for minimising damage to and maintaining contaminant-free pressed fabrics

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Apply safe handling practices for equipment, products and materials
- Explain the impact of machine temperature and pressure on product quality and output
- Interpret work order and locate and apply relevant information
- Press at least five different types of materials
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment

Resource implications

Appropriate materials, steam pressing equipment, care labels and work orders.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<p>Steam pressing operations cover work involving the operation of steam pressing equipment, monitoring operations and work quality, maintaining personal safety and the safety of others</p>
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment
Task planning is to cover:	<ul style="list-style-type: none"> • required temperatures and warm up/cool down times • key parts of the materials to be pressed which require checks for quality of work • work area housekeeping requirements • safe and suitable work area
Materials to be pressed may include but are not limited to:	<ul style="list-style-type: none"> • plain and patterned fabrics • lining materials and leather used in the manufacture of soft furnishing items
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices</p>
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication
Material lifting and holding will be impacted on by:	<ul style="list-style-type: none"> • machine type • personal right- or left-hand preference of the operator • manipulation requirements for the materials • special pressing requirements for different parts of the pressed panels

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF2006B Calculate fabric quantities for window coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to calculate fabric quantities for window coverings.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for calculations	1.1. Measuring and calculating equipment are collected 1.2. Mathematical processes and guide charts required are identified 1.3. Drape requirements, fabric types and lining/interlining requirements are noted from work order
2. Calculate drape fabric requirements	2.1. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.2. Fabric repeats are measured for customer selected fabrics and recorded 2.3. Fabric width is checked taking note of any wider than usual selvages 2.4. Finished length of window covering is identified from order 2.5. Heading type is identified from order and fullness ratio is identified 2.6. Number of fabric drops per curtain is calculated 2.7. Length of each fabric drop is calculated based on finished length plus hem and heading allowances and pattern repeats 2.8. Allowances for seams, hems, headings, drape fullness or heading type are noted on the work order
3. Calculate lining and interlining quantities	3.1. Width of lining (and, where required, interlining fabrics) is noted 3.2. Number of lining/interlining widths is calculated based on required number of drape drops 3.3. Length of lining/interlining drops is calculated, including hem allowances 3.4. Amount of lining/interlining fabric is calculated and marked on work order 3.5. Procedures for minimising waste fabric are identified and used
4. Complete documentation	4.1. Work orders for cutting and machining are completed following workplace procedures 4.2. Documentation is forwarded to appropriate work areas and filed as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate calculation problems, avoid re-working and wastage
- use workplace technology related to the task, including calculators and measuring devices

Required knowledge

- fabric types, common faults and inspection procedures
- design features of the fabrics and finished curtains in relation to attractive draping requirements
- work requirements, including workplace standards

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Identify materials used and any special handling requirements for those materials
- Apply safe handling practices for equipment, products and materials
- Interpret work order and locate and apply relevant information
- Measure and accurately calculate fabric quantities to minimise waste and produce consistent quality drapes for at least five different types of window coverings
- Identify materials used and any special marking out requirements
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment or products
 - maintain required production output and product quality
 - minimise the risk of injury to self or others
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment

Resource implications

Work orders, fabrics, including linings and interlinings, calculator and, where available, workplace pleat calculating charts.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment,

EVIDENCE GUIDE

materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the measurement and calculation of fabric quantities
Window covering calculations	Window covering calculations cover work involved in the calculations for fabric and lining quantities for all curtains, Austrians, Romans and festoon blinds
Calculation of the number of drops is based on:	<ul style="list-style-type: none"> • useable drapery fabric width • fullness requirements for heading type • size of returns and overlaps • track width identified in customer order
Tools and equipment may include:	<ul style="list-style-type: none"> • measuring and calculating equipment • including tapes • rulers • calculators and computers
Materials may include:	<ul style="list-style-type: none"> • all forms of curtaining and other window covering material
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Manufacturer specifications and operational procedures

RANGE STATEMENT

	<ul style="list-style-type: none"> • Workplace procedures relating to measuring and cutting of fabric • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication
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Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF2007B Construct unlined curtains/drapes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to construct and machine sew unlined, pleated and gathered curtains/drapes.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Elements describe the essential outcomes of a unit of competency.	1.1. Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
2. Establish work requirements and prepare for work	2.1. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.2. Work order requirements are checked and confirmed 2.3. Heading type is recognised to identify personal work requirements for measuring, calculating, sewing, folding and finishing 2.4. Correct side of fabric, naps, direction of pattern and pattern matches are identified 2.5. Drapery panels are checked for faults 2.6. Appropriate needle types for the fabric are selected and threaded
3. Lay out work to be sewn	3.1. Top fabric is folded bringing edges to be seamed together to match any pattern and to maintain an appropriate finished length following workplace quality requirements 3.2. Fabric is held together and, where required, supported with pins or other workplace approved methods
4. Stitch seams and form corners	4.1. Curtain fabrics are held to allow for personal right-hand or left-hand preference of the sewer, and manipulation requirements for the bulk and slipperiness of the materials 4.2. Machine sewing operations are completed correctly 4.3. Corners are folded and formed to match work order requirements, inserting any required weight bags 4.4. Hems are completed using any required weights, stitch type and appropriate sewing method 4.5. Corners are stitched and finished, trimming any threads
5. Construct curtain headings	5.1. Curtain heading tape is attached according to workplace approved method and job instructions 5.2. Sewn pleat spaces are kept uniform within drops

ELEMENT	PERFORMANCE CRITERIA
	5.3. Care labels are fixed to heading or hem of curtain according to workplace standards
6. Finish work	6.1. Finished curtain panels, including stitch length, end finishing and final length of finished curtain panels, are checked against work requirements 6.2. Work is pressed for the next work stage 6.3. Any parts of the work which do not comply with work order are repaired
7. Complete work for next process	7.1. Workplace required documentation is completed and stored following appropriate procedures 7.2. Finished work is folded, protected and dispatched to next process following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, avoid waste and estimate material requirements
- use pre-checking and inspection techniques to anticipate construction problems, avoid re-working and wastage
- use the limited workplace technology related to the construction tasks, including tools, equipment, calculators and measuring devices

Required knowledge

- identification of equipment, processes and procedures for the sewing operations
- fabric types, common faults and inspection procedures
- risks to health from repetitive actions and prevention strategies
- design features of the heading styles sewn in relation to work requirements
- work requirements, including workplace standards

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Apply safe handling practices for equipment, products and materials
- Interpret work order to manufacture the required lined curtains
- Measure accurately
- Identify materials used and any special sewing requirements for those materials
- Construct at least four different types of pleated or gathered curtains/drapes
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment

Resource implications

Appropriate sewing machine, fabrics, work order, workplace information, including work procedures and/or equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<p>This unit covers the construction of unlined/coated curtains/drapes. This covers work involving sewing and manipulation requirements for machine sewing a range of curtain heading styles which are to include:</p> <ul style="list-style-type: none"> • gathered • slotted (rod pocket) • pencil pleat and pinch pleat and may include tab top • knife pleat • goblet pleat and cartridge
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • industrial sewing machines and pressing equipment
Tools and equipment may include:	<ul style="list-style-type: none"> • measuring and calculating equipment, including tapes, rulers, calculators, computers • fabric and general cutting and sewing tools, including scissors, sewing machines, hemming machines, overlockers, pleating machines
Materials to be machined may	<ul style="list-style-type: none"> • lining

RANGE STATEMENT	
include, but are not limited to:	<ul style="list-style-type: none"> • interlining and curtain fabrics • fasteners • threads
Work order requirements are to cover:	<ul style="list-style-type: none"> • widths and numbers of finished curtain panels, heading style, number and spacing of pleats • finishing and any filling of curtain headings
Marking out	Marking out is to cover returns, overlaps, pleats and spaces
Machine sewing operations must ensure:	<ul style="list-style-type: none"> • straight stitching along marked pleat line from the top of the heading to the lower edge of the stiffening material or vice versa • securing of beginning and end of threads of the stitching with even and appropriate seam stitch type, length, visibility • seams are flat • the inclusion of care labels and fibre content labels where required • finished components match work requirements
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF2008B Construct lined curtains/drapes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to construct and machine sew lined curtains/drapes.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish work requirements and prepare for work	1.1. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 1.2. Work order requirements are checked and confirmed 1.3. Heading type is recognised to identify personal work requirements for measuring, calculating, sewing, folding and finishing 1.4. Correct side of fabric, naps, direction of pattern and pattern matches are identified 1.5. Lining attachment method is recognised to identify any attachments and fasteners, trims and sewing requirements 1.6. Drapery panels are checked for faults 1.7. Appropriate needle types for the fabric are selected and threaded
2. Lay out work to be sewn	2.1. Top fabric is folded bringing edges to be seamed together to match any pattern and to maintain an appropriate finished length following workplace quality requirements 2.2. Linings and any interlining materials are laid out and folded ready for sewing 2.3. Fabric is held together and, where required, supported with pins or other workplace approved methods
3. Stitch seams and form corners	3.1. Curtain fabrics are held to allow for personal right-hand or left-hand preference of the sewer, and manipulation requirements for the bulk and slipperiness of the materials 3.2. Linings to be bagged are sewn in place 3.3. Machine sewing operations are completed correctly 3.4. Corners are folded and formed to match work order requirements, inserting any required weight bags 3.5. Hems are completed using any required weights, stitch type and appropriate sewing method 3.6. Corners are stitched and finished, trimming any threads
4. Construct curtain headings	4.1. Curtain heading tape is attached according to workplace approved method and job instructions 4.2. Attached lining and interlinings are sewn into heading

ELEMENT	PERFORMANCE CRITERIA
	<p>4.3. Sewn pleat spaces are kept uniform within drops</p> <p>4.4. Linings and interlinings are attached to curtain backs by sewing or using appropriate fasteners</p> <p>4.5. Care labels are fixed to heading or hem of curtain according to workplace standards</p> <p>4.6. Separate linings are sewn using appropriate heading tape and attached to curtain</p>
5. Finish work	<p>5.1. Finished curtain panels, including stitch length, end finishing and final length of finished curtain panels are checked against work requirements</p> <p>5.2. Work is pressed for the next work stage</p> <p>5.3. Any parts of the work which do not comply with work order are repaired</p>
6. Complete work for next process	<p>6.1. Workplace required documentation is completed and stored following appropriate procedures</p> <p>6.2. Finished work is folded, protected and dispatched to next process following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, avoid waste and estimate material requirements
- use pre-checking and inspection techniques to anticipate construction problems, avoid re-working and wastage
- use the limited workplace technology related to the construction tasks, including tools, equipment, calculators and measuring devices

Required knowledge

- identification of workplace standards, equipment and procedures for the sewing operations
- fabric types, lining and interlining materials, including common faults and inspection procedures
- prevention strategies for risks to health from lifting, stretching and repetitive actions
- how the design features of the curtains effect constructing the lined curtains

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Apply safe handling practices for equipment, products and materials • Interpret work order to manufacture the required lined curtains • Identify materials used and any special sewing requirements for those materials • Measure accurately • Construct at least two different types of lined curtains/drapes • Follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> • minimise the risk of injury to self and others • prevent damage to goods, equipment and products • maintain required production output and product quality • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment • Report process or materials faults, damaged products or equipment
<p>Resource implications</p>	<p>Appropriate sewing machine, fabrics, work order, workplace information, including work procedures and/or equipment instructions.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Unit scope</p>	<ul style="list-style-type: none"> • This unit addresses the construction of lined curtains and drapes. It covers work involving sewing and manipulation requirements for machine sewing a range of linings which are to include: • detached and sewn-in linings and may include interlined • loose-lined and bag-lined products
<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment
<p>Machines may include, but are not limited to:</p>	<ul style="list-style-type: none"> • industrial sewing machines and pressing equipment
<p>Tools and equipment may include:</p>	<ul style="list-style-type: none"> • measuring and calculating equipment, including tapes, rulers, calculators, computers • fabric and general cutting and sewing tools, including scissors, sewing machines, hemming machines, overlockers, pleating machines
<p>Materials to be machined may include but are not limited to:</p>	<ul style="list-style-type: none"> • lining • interlining and curtain fabrics • fasteners • threads

RANGE STATEMENT	
Work order requirements are to cover:	<ul style="list-style-type: none"> widths and numbers of finished curtain panels, heading style, number and spacing of pleats finishing and any filling of curtain headings
Marking out	Marking out is to cover returns, overlaps, pleats and spaces
Machine sewing operations must ensure:	<ul style="list-style-type: none"> straight stitching along seam lines from the top to the lower edge of the material or vice versa securing of beginning and end of threads of the stitching with even and appropriate seam stitch type, length, visibility seams are flat the inclusion of care labels and fibre content labels where required finished components match work requirements
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> Machine manufacturer specifications and operational procedures Workplace procedures relating to the setting and operation of machinery Work instructions, including job sheets, plans, drawings and designs Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF2009B Construct padded pelmets

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to cut, prepare and assemble timber components, attach padding, fabric and trims to pelmets.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify pelmet and padding materials to be used	1.1. Type of pelmet to be padded is identified 1.2. Components of the pelmet requiring padding and specifications for the work are identified from work instructions 1.3. Quality and quantity requirements are identified
2. Prepare for work	2.1. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.2. Required tools and materials to complete the work are sourced, collected and checked for suitability 2.3. Fixing devices or adhesives are selected in line with specifications or type of padding and headboard 2.4. Required personal protection equipment is located 2.5. Work is planned to conform to quality requirements, minimise time, and economically use materials 2.6. Procedures are identified for checking the quality of the work
3. Cut timber and pad pelmet	3.1. Timber components are measured and cut to required specifications 3.2. Padding and other materials are laid out, components are assembled and attached using appropriate fastenings, tools and equipment 3.3. Tools and equipment are operated in compliance with workplace procedures and OHS requirements 3.4. Work is monitored to ensure quality of product, including correct finish, operation of any moving parts, and number and fitting of fasteners/brackets 3.5. Problems occurring during work operations are identified and reported following workplace procedures 3.6. Waste quantities are minimised, and reusable materials are collected and stored following workplace procedures 3.7. Routine maintenance of tools and equipment is carried out according to workplace and manufacturers' instructions 3.8. Waste is removed and work area is cleaned following workplace procedures
4. Prepare pelmet for next process	4.1. Completed pelmets are packaged following work requirements

ELEMENT	PERFORMANCE CRITERIA
	4.2. The package is secured, labelled and stored according to workplace procedures 4.3. Appropriate documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, avoid waste and estimate material requirements
- use pre-checking and inspection techniques to anticipate construction problems, avoid re-working and wastage
- use workplace technology related to the construction tasks, including tools, equipment, calculators and measuring devices

Required knowledge

- workplace standards and procedures related to the making up of padded pelmets
- identification of equipment, materials, processes and procedures
- operation of tools and equipment used in the padding process

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Apply safe handling practices for equipment, products and materials
- Interpret work order and locate and apply relevant information
- Select and make up appropriate timber frame
- Select and attach appropriate padding, fabric and trims
- Construct at least three different types of padded pelmets
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Pelmets, padding materials, tools and equipment, appropriate quality specifications and work instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

This unit covers work involved in the attachment of padding, fabric and trimming to pelmets and where necessary, the packaging, labelling and storing of products

Unit context

- OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set-up and operation of machines. This may be demonstrated either individually or in a team environment
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements

Tools and equipment may include:

- tapes
- rulers
- calculators
- computers
- scissors
- staplers
- sewing machines
- hammers
- staple guns
- jigsaws
- drop saws

Materials to be used may include:

- curtain fabric
- timber
- adhesives and padding material

RANGE STATEMENT	
Padding materials include:	<ul style="list-style-type: none"> • padding • fabric • linings and trims
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF2010B Make up tracks for window coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to cut, assemble and package tracking components and curtain hardware in preparation for on-site fitting
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify products, fittings and attachments to be used	1.1. Type of tracks to be fitted and work order requirements are identified 1.2. Attachments, required components and tools are identified from work instructions 1.3. Quality and quantity requirements are identified
2. Prepare for work	2.1. OH&S requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.2. Required tools and materials to complete the work are sourced, collected and checked for suitability 2.3. Cutting equipment is checked for correct setting and operation of safety cut-out and guards 2.4. Work is planned to conform to quality requirements, minimise time, and economically use materials 2.5. Procedures are identified for checking the quality of the work
3. Cut tracking to required length	3.1. Cutting equipment is operated in compliance with workplace procedures and OH&S requirements 3.2. Cutting is monitored to ensure quality of product 3.3. Problems occurring during work operations are identified and reported following workplace procedures 3.4. Waste quantities are minimised, and reusable materials are collected and stored following workplace procedures 3.5. Routine maintenance of the cutting equipment is carried out according to workplace and manufacturers' instructions 3.6. Waste is removed and work area is cleaned following workplace procedures
4. Assemble and package tracking components	4.1. Components required to complete the tracking are collected, assembled and checked for quality and quantity 4.2. Components are packaged following work requirements 4.3. The completed package is secured, labelled and stored according to workplace procedures 4.4. Appropriate documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, avoid wastage and estimate material requirements
- use pre-checking and inspection techniques to anticipate construction and assembly problems, avoid reworking and avoid wastage
- use the limited workplace technology related to construction and assembly tasks, including tools, equipment, calculators and measuring devices

Required knowledge

- the types, characteristics, uses and limitations of tracks
- identification of equipment, materials, processes and procedures
- workplace standards and procedures related to the making up of tracks

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Apply safe handling practices for equipment, products and materials
- Interpret work order and locate and apply relevant information
- Make up at least three different types of tracks
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment or products
 - maintain required production output and product quality
 - minimise the risk of injury to self or others
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Tracks and components, tools and equipment, appropriate quality specifications and work instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>This unit covers work involved in the making and/or customising of timber or metal tracks and components for window coverings, including:</p>	<ul style="list-style-type: none"> • tracks • poles • brackets • runners • end pieces • cording • hooks and rings
<p>Unit context</p>	<ul style="list-style-type: none"> • OH&S requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment
<p>Tools and equipment may include, but are not limited to:</p>	<ul style="list-style-type: none"> • hand or power operated tools • including static mounted circular saws • docking saws and mitre saws • drills • hammers • screwdrivers
<p>Tracking materials may include but are not limited to:</p>	<ul style="list-style-type: none"> • timber • metal • plastic
<p>Personal protective equipment</p>	<p>Personal protective equipment is to include that prescribed under legislation, regulations and</p>

RANGE STATEMENT	
	enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturers' specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF2011B Fit and adjust curtain hardware

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to fit and adjust tracking, rods, poles and other curtain hardware.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify products, fittings and attachments to be used	1.1.Type of tracks, rods or poles to be fitted and work order requirements are identified 1.2.Attachments, required materials and tools are identified from work instructions and, where necessary, site inspection 1.3.The effect of the fitting process on overall finished window is identified
2. Plan process for fitting attachments to products	2.1.OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.2.Appropriate equipment is identified to minimise risks of damage to customers' premises or injuries to self 2.3.Manufacturers' information on products used is located and used to plan work 2.4.Attachment process is planned to conform to quality requirements, minimise time, economically use materials and maximise appearance of the finished work 2.5.Materials, tools and equipment are assembled and checked for suitability for purpose 2.6.Track/pole/rod width and projection is set up to correctly match work order requirements
3. Complete fitting operations	3.1.Work plan is followed ensuring compliance with workplace procedures and OH&S requirements 3.2.Tracks/rods/poles are installed and tested for correct operation
4. Clean work area and prepare products for the next process	4.1.Work site and any equipment used is cleaned and stored appropriately 4.2.Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed 4.3.Completed work is inspected and compared to workplace quality requirements 4.4.Fittings which do not meet quality specifications are repaired on-site or returned to the workroom for repair 4.5.Appropriate documentation is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, avoid wastage and estimate material requirements
- use pre-checking and inspection techniques to anticipate fitting and adjustment problems, avoid re-working and wastage
- use the limited workplace technology related to the fitting and adjusting tasks, including tools, equipment, calculators and measuring devices

Required knowledge

- workflow in relation to fitting, customising and adjusting curtain tracks, poles and other hardware, including bending of tracks
- identification of equipment, processes and procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling practices for equipment, products and materials
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to goods, equipment or products
 - maintain required production output and product quality
 - minimise the risk of injury to self or others
- Fit and adjust at least five different types of window tracks, which must include at least one cord-drawn, one decorative pole and one conduit. This must include at least one ceiling fitted and one face fitted
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Tracks, rods, poles, conduit, tools and equipment, appropriate quality specifications and instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment
Curtain hardware may include:	<ul style="list-style-type: none"> • hand-drawn or cord-drawn tracks • decorative rods • poles • cord tensioners and conduit
Fitting and adjustment	<p>Fitting and adjustment covers work involved in the fitting, customising and adjustment of tracks, decorative rods, poles and conduit for window coverings that are hand-drawn, manually cord-drawn or fixed</p>
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • hand or power operated tools • including drills • hammers • screwdrivers
Width and projection set up	<p>Width and projection set up is to provide for stacking space, overlap, projection, return, and number of rings/hooks, guides/runners and other fittings</p>
Personal protective equipment	<p>Personal protective equipment is to include that</p>

RANGE STATEMENT	
	prescribed under legislation, regulation and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF2012B Fit and adjust interior blinds

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to fit and adjust interior blinds, including Roman, Austrian, festoon, Holland, Venetian, vertical and pleated.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify products, fittings and attachments to be used	1.1.Type of blind to be fitted and work order requirements are identified 1.2.Attachments, required materials and tools are identified from work instructions and (where necessary) site inspection 1.3.The effect of the fitting process on overall finished window is identified
2. Plan process for fitting blinds	2.1.OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.2.Appropriate equipment is identified to minimise risks of damage to customers premises or injuries to self 2.3.Manufacturer information on products used is located and used to plan work 2.4.Attachment process is planned to conform to quality requirements, maximise the appearance of the finished work and provide for the most economical use of materials and labour 2.5.Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 2.6.Blind operating mechanism is set up and checked against workplace requirements and work instructions
3. Complete fitting operations	3.1.Work plan is followed ensuring compliance with workplace procedures and OHS requirements 3.2.Blinds are fitted and tested for correct operation 3.3.Pelmets, cord brackets or pulleys are fitted using appropriate hardware and adjusted to suit blind operation
4. Clean work area	4.1.Work site and any equipment used are cleaned and stored appropriately 4.2.Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed 4.3.Completed work is inspected and compared to workplace quality requirements 4.4.Blinds which do not meet quality specifications are repaired on-site or returned to the workroom for

ELEMENT	PERFORMANCE CRITERIA
	repair 4.5. Appropriate documentation is completed 4.6. Fittings and blinds which do not meet quality specifications are repaired on-site or returned to the workroom for repair 4.7. Appropriate documentation/reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, avoid waste and estimate material requirements
- use pre-checking and inspection techniques to anticipate fitting problems, avoid re-working and wastage
- use workplace technology related to fitting and adjustment tasks, including tools, equipment and measuring devices

Required knowledge

- types, uses, limitations and operating mechanisms of interior blinds
- identification of equipment, processes and procedures
- workflow in relation to fitting blinds

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Apply safe handling practices for equipment, products and materials
- Interpret work order and locate and apply relevant information
- Fit and adjust at least five different types of interior blinds
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Blinds, tools and equipment, appropriate quality specifications and instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment
<p>Blinds to be fitted may include but are not limited to:</p>	<ul style="list-style-type: none"> • Roman • Austrian • festoon • Holland • Venetian • vertical • pleated
<p>Tools and equipment may include, but are not limited to:</p>	<ul style="list-style-type: none"> • hand and power tools • including hammers • screwdrivers • drills
<p>Personal protective equipment</p>	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices</p>
<p>Information and procedures</p>	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, plans,

RANGE STATEMENT	
	drawings and designs <ul style="list-style-type: none"> • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF2013B Dress windows

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to decoratively install and adjust window finishings.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify window finishings to be installed	1.1.Type of window finishings to be fitted and work order requirements are identified 1.2.Materials and tools are identified from work instructions and, where necessary, site inspection 1.3.The effect of the fitting process on overall finished window is identified
2. Plan process for dressing window	2.1.OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.2.Appropriate equipment is identified to minimise risks of damage to customers premises or injuries to self 2.3.Manufacturers' information on products used is located and used to plan work 2.4.Decorator's specifications (if any) are used to plan work 2.5.Attachment process is planned to conform to quality requirements, minimise time, economically use materials and maximise appearance of the finished work 2.6.Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition
3. Complete fitting operations	3.1.Backing is attached, where appropriate, to the curtain using appropriate fittings 3.2.Required number of glides are identified, matched between window finishing and tracks and added or removed as required 3.3.Curtains are attached to tracks and checked for smooth and even operation and hanging 3.4.Curtain height and floor clearance is checked and compared to work order requirement 3.5.Pelmets, valances, swags, pull-backs or tie-back holders are fitted using appropriate hardware and adjusted for fall, neatness and appearance 3.6.Where required, pleats are folded and tied to maintain required pleating
4. Clean work area	4.1.Work site and any equipment used is cleaned and stored appropriately

ELEMENT	PERFORMANCE CRITERIA
	4.2. Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed 4.3. Completed work is inspected and compared to workplace quality requirements 4.4. Fittings and curtains which do not meet quality specifications are repaired on-site or returned to the workroom for repair 4.5. Appropriate documentation or reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, avoid wastage and estimate material requirements
- use pre-checking and inspection techniques to anticipate window dressing problems, avoid re-working and wastage
- use workplace technology related to the dressing of windows, including tools, equipment, calculators and measuring devices

Required knowledge

- window dressing and fitting materials and techniques
- identification of equipment, processes and procedures
- workflow in relation to fitting curtains, valances, swags and other window treatments

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Interpret work order and locate and apply relevant information • Apply safe handling practices for equipment, products and materials • Follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> • minimise the risk of injury to self and others • prevent damage to goods, equipment and products • maintain required production output and product quality • Install at least four different types of window dressings, which must include curtains and tie-backs • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
<p>Resource implications</p>	<p>Curtains, tracks, decorative window finishings, tools and equipment, appropriate quality specifications and instructions.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the installation and adjustment of window finishings. This may be demonstrated either individually or in a team environment.
Window finishings may include:	<ul style="list-style-type: none"> • curtains • sheers • swags • pelmets • valances • tie-backs and hold-backs
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • hand or power operated tools • including drills • hammers • screwdrivers
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, plans,

RANGE STATEMENT	
	drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF2014B Use soft furnishing sector hand and power tools

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use hand and power tools in applications relating to the soft furnishing sector of the furnishing industry.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hand and power tools	1.1.Types of hand and power tools and their functions are identified 1.2.Sources of power supply are recognised 1.3.OHS requirements for using power tools are recognised and adhered to
2. Select hand tools	2.1.Hand tools are selected consistent with the needs of the job 2.2.Tools are checked for serviceability and safety and any faults are corrected or processed for repair 2.3.Equipment is selected to hold or support material for hand tool application where applicable
3. Use hand tools	3.1.Material is located and held in position for hand tool application 3.2.Hand tools are safely and effectively used according to their intended use 3.3.Hand tools are safely located when not in immediate use
4. Select power tools	4.1.Appropriate personal protective equipment is selected, correctly fitted and used 4.2.Power tools are selected consistent with the needs of the job in accordance with conventional work practice 4.3.Power tools are visually checked for serviceability/safety in accordance with OHS requirements and any faults are corrected or processed for repair 4.4.Equipment is selected to hold or support materials for power tool application where applicable
5. Use power tools	5.1.Material is located and held in position for power tool application where applicable 5.2.Power tools are safely and effectively used in application processes 5.3.Power tools are safely located when not in use
6. Clean up work area and tools	6.1.All tools are cleaned, maintained and stored 6.2.Equipment is cleaned, maintained and stored 6.3.Work area is cleared and waste removed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect and understand information related to the use and maintenance of hand and power tools
- communicate ideas and information to enable confirmation of work requirements and specifications and the reporting of faults and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of tools
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate tool handling problems, avoid re-working and wastage
- use workplace technology related to the use and operator maintenance of hand and power tools and associated materials

Required knowledge

- function, purpose and operator maintenance requirements of hand tools used in the workplace
- function, purpose and operator maintenance requirements of power tools used in the workplace
- workplace safety requirements and OHS legislation

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<p>Apply safe handling practices for equipment, products and materials</p> <ul style="list-style-type: none"> • Adopt and carry out correct procedures prior to and during use of the hand and power tools prescribed in the Range Statement • Follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> • minimise the risk of injury to self and others • prevent damage to goods, equipment and products • maintain required production output and product quality • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment • Indicate compliance with organisational policies and procedures, including quality assurance requirements
<p>Resource implications</p>	<p>Soft furnishing sector hand and power tools, materials used in the manufacturing and/or installation of soft furnishing products.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate skill, accuracy and dexterity in the application of tools to work tasks
Hand tools are to include:	<ul style="list-style-type: none"> • scissors • cutting blades • tape measures • rulers • hammers • staple guns and screwdrivers
Power tools are to include:	<ul style="list-style-type: none"> • drills • screwdrivers • staple guns • pressing equipment • others as required by enterprises
Fault reporting	Reporting of faults in the operation of hand and power tools may be verbal or written
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Hand and power tool manufacturer specifications and operational procedures • Workplace procedures relating to OHS, tool handling and operation, reporting and

RANGE STATEMENT	
	communication <ul style="list-style-type: none"> • Work instructions, including job sheets, plans, drawings and designs

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF3001B Operate drop cutting machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use drop cutting machines.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify drop cutting machine controls, adjustments and work procedures	1.1. Job requirements are identified from workplace approved operating procedures 1.2. Equipment components, adjustment points and controls are identified 1.3. Operating procedures are checked to identify approved operating range and adjustments 1.4. Equipment operations and production procedures are identified 1.5. The process for obtaining materials and moving products to the next process is identified
2. Plan and prepare for work	2.1. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 2.2. Inspection procedure for materials quality and equipment condition is identified 2.3. Work sequence is planned to suit job 2.4. OH&S requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.5. Equipment emergency stops and guards are identified 2.6. Machine checking procedures are identified 2.7. Any required supplementary equipment is identified for routine lubrication and adjustments of the equipment
3. Set and operate drop cutting machine	3.1. Fabric length and angle of cut are set on the drop cutting machine following work order 3.2. Fabric is fixed to the machine using appropriate hooks or other fasteners 3.3. Fabric is checked for flaws prior to cutting 3.4. Fabric use minimises waste materials 3.5. Cutting operations provide the required product quality standards, work outputs and minimisation of waste 3.6. Problems are identified and reported following workplace procedures 3.7. Cut lengths are checked for required quality, and moved to the next process 3.8. Waste and scrap is dealt with following workplace

ELEMENT	PERFORMANCE CRITERIA
	procedures 3.9. Equipment and work area clean up are completed following workplace procedures
4. Identify quality requirements	4.1. Process is monitored and conditions which may affect quality standards are reported 4.2. Observed requirements for repairs or maintenance are identified and reported to appropriate personnel 4.3. Authorised changes to settings or operating procedures are implemented

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate drop cutting problems, avoid re-working and wastage
- use workplace technology related to drop cutting, including tools and equipment, power supply systems

Required knowledge

- types, characteristics, uses and limitations of drop cutting machines
- characteristics of materials used and products produced
- identification of equipment adjustment points, processes and procedures
- procedure for reporting faulty products or interruptions to workflow
- workflow requirements for process

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Apply safe handling practices for equipment, products and materials • Identify and operate machine controls and guards • Set depth and angle of cut to specification • Interpret work order and locate and apply relevant information • Operate drop cutting machine to cut at least five different types of material or fabric • Follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> • minimise the risk of injury to self and others • prevent damage to goods, equipment and products • maintain required production output and product quality • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
<p>Resource implications</p>	<p>Drop cutting machines, work orders, equipment operating procedures, fabric for cutting.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<p>This unit covers work involving the operation of drop cutting machines.</p> <ul style="list-style-type: none"> • Materials to be machined may include: <ul style="list-style-type: none"> • synthetic or natural fabrics, used for: <ul style="list-style-type: none"> • curtains • internal or external blinds • awnings and shade wings
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment
Machine checking procedures may include:	<ul style="list-style-type: none"> • materials inputs and outputs • cutting blade condition • attachments and ancillary equipment • quality requirements for the process stage
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices</p>
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery

RANGE STATEMENT

	<ul style="list-style-type: none"> • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication
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Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF3002B Use automated curtain pleating equipment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use automated pleating equipment to construct curtain headings.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify automated curtain pleating equipment controls and work procedures	1.1. Location and function of the equipment, including, equipment condition, components and controls are identified 1.2. Work procedures and documentation are checked to identify that settings are within approved operating range 1.3. Inspection procedure for quality requirements for hemmed and seamed curtain drops is identified 1.4. Heading type is recognised to identify personal work requirements for measuring, calculating, folding and finishing 1.5. The process for obtaining materials and moving products to the next process is identified
2. Prepare for work	2.1. Work order requirements are identified 2.2. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.3. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 2.4. Work sequence is planned to suit job 2.5. Equipment on/off switches and guards are identified 2.6. Pleated width for the curtain order is calculated 2.7. Adjustments to equipment settings to match work order heading requirements and finished curtain width are made following workplace approved procedures 2.8. Any required supplementary equipment is identified for routine cleaning, lubrication and adjustments
3. Operate automated curtain pleating equipment	3.1. Lubrications and adjustments are made to the machine 3.2. Curtains are spread on work area and clamped in the automated equipment ensuring a smooth and square alignment with the machine guides 3.3. Curtain pleating is completed, monitoring equipment conditions and drape quality 3.4. Finished width of each curtain drop is measured and checked against work order and pleat size is adjusted where required

ELEMENT	PERFORMANCE CRITERIA
	<p>3.5. Curtain headings are stapled or clipped within required heading area</p> <p>3.6. Problems are identified and reported following workplace procedures</p> <p>3.7. Finished work is dispatched to next process following workplace procedures</p> <p>3.8. Equipment and work area clean up are completed following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, avoid wastage and estimate material requirements
- use pre-checking and inspection techniques to anticipate pleating problems, avoid re-working and wastage
- use workplace technology related to pleating tasks, including tools, equipment and power supply systems

Required knowledge

- types, characteristics, uses and limitations of curtain pleating equipment
- characteristics of materials used and products produced
- identification of equipment adjustment points, processes and procedures
- procedure for reporting faulty products or interruptions to workflow
- workflow requirements for process

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Apply safe handling practices for equipment, products and materials
- Set up automated curtain pleating equipment to produce the required headings
- Interpret work order and locate and apply relevant information
- Operate automated curtain pleating equipment to produce at least three different heading types
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Report process or materials faults, damaged curtains or equipment
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Automated pleating equipment, operating procedures, unpleated curtains.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit covers work involving the set up and use of automated curtain pleating equipment following workplace operating procedures
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF3003B Follow patterns to produce window toppings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to produce window toppings such as swags, tails, and soft padded pelmets, following the requirements of patterns.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	1.1. Job requirements are identified from work instructions and patterns 1.2. Pattern is interpreted to determine detail or work requirements 1.3. Instructions for sequencing of work, particular measurements or adjustments are interpreted 1.4. Work sequence is planned, including quality checkpoints
2. Prepare for work	2.1. Suitable work area is selected for the tasks 2.2. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.3. Materials are selected to match customer requirements, suitability for the purpose and work instructions 2.4. Potential hazards are identified from observation of the tools, equipment, materials and workplace reference material 2.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition
3. Complete construction	3.1. Window toppings are constructed following work instructions 3.2. Work is checked against patterns and work sheets at the identified checkpoints 3.3. Non-conformity with the required quality standards is rectified
4. Finalise operations	4.1. Completed work is checked against required quality standards 4.2. Documentation or reporting is completed following workplace procedures 4.3. Work area is cleaned, tools and equipment are returned to storage 4.4. Unused materials are returned to storage and waste and scrap is dealt with following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and avoid wastage
- use workplace technology related to the production of window toppings, including tools, equipment, materials and measuring devices

Required knowledge

- the type, characteristics, uses and limitations of window toppings
- the process for interpretation of patterns
- identification of equipment, processes and procedures
- workflow in relation to window topping production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Identify materials used and any special sewing or handling requirements for those materials
- Apply safe handling practices for equipment, products and materials
- Interpret work order and patterns and locate and apply relevant information
- Produce at least one each of jabots, swags and tails and soft padded pelmets or bonded pelmets
- Select and use tools and equipment appropriate to the task
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment

Resource implications

Patterns, materials, tools and equipment.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the reading and interpreting of patterns, plans and instructions. This may be demonstrated either individually or in a team environment

Window toppings may include:

- swags
- jabots
- falls/tails and accessories
- soft padded pelmets and bonded pelmets

Tools and equipment may include:

- measuring and calculating equipment, including:
 - tapes
 - rulers
 - calculators and computers
- fabric and general cutting and sewing tools, including:
 - scissors
 - saws
 - drills
 - staplers
 - sewing machines
 - hemming machines

RANGE STATEMENT	
	<ul style="list-style-type: none"> • overlockers • glue guns • swag templates
Materials may include:	<ul style="list-style-type: none"> • plain and patterned fabric • velvet and vinyl
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the production of window topping items • Work instructions, including job sheets, plans, patterns, drawings and designs • Workplace procedures relating to reporting and communication
Pattern interpretation	Pattern interpretation is to determine the type of material specified, type of material specified, required tools and equipment for the task, number and type of window toppings to be produced, and quality requirements

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFSF3004B Construct roman style blinds

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to construct and sew roman style blinds to workplace requirements.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish work requirements and prepare for work	1.1. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 1.2. Work order requirements are checked and confirmed 1.3. Correct side of fabric, naps, direction of pattern and pattern matches are identified 1.4. Fabric is checked for flaws 1.5. Appropriate needle types for the fabric are selected and threaded
2. Lay out work to be sewn	2.1. Linings and interlining materials are laid out and folded ready for sewing 2.2. Lining materials patterns are matched and secured 2.3. Face fabric is folded bringing edges to be seamed together to check any pattern matching and to maintain an appropriate finished length 2.4. Pattern matches are kept uniform within drops and across matching sets of blinds 2.5. Measuring and marking out of fold or stitching lines for batten placement is even and matches the work order or workplace requirements 2.6. Fabric is held together and, where required, supported with pins or other workplace approved methods
3. Stitch seams and form corners	3.1. Fabrics are held to allow for the personal right-hand or left-hand preference of the sewer, and manipulation requirements for the bulk and slipperiness of the materials 3.2. Machine sewing operations are completed correctly 3.3. Linings and interlinings are attached to the back of blind 3.4. Finished length and width of each panel are measured and checked against work order and adjusted where required 3.5. Batten pockets are inserted and fixed following workplace procedures 3.6. Hems are completed using any required weights, stitch type and appropriate sewing method 3.7. Corners are stitched and finished and threads trimmed

ELEMENT	PERFORMANCE CRITERIA
4. Apply quality checks	<p>4.1. Finished blinds are checked ensuring stitch length, end finishing and final length of finished blinds match work requirements</p> <p>4.2. Work is pressed for the next work stage</p> <p>4.3. Rings are attached</p> <p>4.4. Parts of the work which do not comply with work order are repaired</p>
5. Complete work	<p>5.1. Headboard is painted, stained or covered with fabric fixed along the board length, corners are mitred and fixed, reducing bulk and ensuring a neat finish</p> <p>5.2. Blinds are fitted to headboard or track, threading completed and blind folded using appropriate methods</p> <p>5.3. Finished work is protected and dispatched to next process following workplace procedures</p> <p>5.4. Workplace documentation or reporting is completed</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate blind construction problems, avoid re-working and wastage
- use workplace technology related to the construction of roman blinds, including tools, equipment, materials and measuring devices

Required knowledge

- types, characteristics, uses and limitations of roman blinds
- design features of the roman blinds
- fabric types, common faults and inspection procedures
- identification of equipment, processes and procedures for making the blind style
- work requirements, including workplace standards
- risks to health from repetitive actions and prevention strategies

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order, locate, use information relevant to the tasks completed
- Apply safe handling practices for equipment, products and materials
- Measure accurately and construct blinds to required size and accuracy
- Construct at least two different types of roman blinds
- Identify materials used and any special sewing requirements for the roman blinds
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment

Resource implications

Appropriate sewing machine, fabrics, work order, workplace information, including work procedures and/or equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

This unit covers work involving sewing and manipulation requirements for machine sewing a range of tailored blind types, including:

- straight or relaxed
- bonded
- oriental
- cascade
- staggered and kooped

Unit context

- OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment

Machine sewing operations

Machine sewing operations are to ensure:

- straight stitching along seam lines from the top to the lower edge of the material or vice versa
- securing of beginning and end of threads of the stitching with even and appropriate seam stitch type, length and visibility
- seams are flat
- finished components match work requirements

Machines may include, but are not limited to:

- industrial sewing machines
- pressing equipment

RANGE STATEMENT	
	<ul style="list-style-type: none"> • staplers • drills • saws
Materials to be machined may include but are not limited to:	<ul style="list-style-type: none"> • lining • interlining and curtain fabrics • fasteners • threads • headboard or track
Work order requirements include but are not limited to:	<ul style="list-style-type: none"> • widths and numbers of finished blinds • seam allowances and types • number and widths of panels • mounting style • headboard or track requirements • lining and any interlining • required fasteners
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF3005B Construct Austrian/festoon style blinds

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit identifies the requirements for constructing and sewing Austrian/festoon style blinds.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish work requirements and prepare for work	1.1. Work order requirements are checked and confirmed 1.2. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 1.3. Correct side of fabric, naps, direction of pattern and pattern matches are identified 1.4. Fabric is checked for flaws 1.5. Appropriate needle types for the fabric are selected and threaded
2. Lay out work to be sewn	2.1. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.2. Linings and any interlining materials are laid out and folded ready for sewing 2.3. Lining materials are matched and secured 2.4. Face fabric is folded, bringing edges to be seamed together to match any pattern and to maintain an appropriate finished length 2.5. Pattern matches are kept uniform within drops and across matching sets of blinds 2.6. Fabric is held together and, where required, supported with pins or other workplace approved methods
3. Stitch seams and form corners	3.1. Curtain fabrics are held to allow for the personal right-hand or left-hand preference of the sewer, and manipulation requirements for the bulk and slipperiness of the materials 3.2. Machine sewing operations are completed correctly 3.3. Finished length and width of each panel is measured and checked against work order and adjusted where required 3.4. Linings and interlinings are attached to back of blind 3.5. Corners are folded and formed to match work order or workplace requirements 3.6. Hems are completed using the appropriate stitch type and sewing method 3.7. Corners are stitched and finished and threads trimmed 3.8. Ring placement positions are measured and marked

ELEMENT	PERFORMANCE CRITERIA
4. Sew gathering materials	<p>4.1. Headings and any stitching or slit along vertical gather lines are completed according to the work order</p> <p>4.2. Ends of stitching are secured and any required weights are attached</p>
5. Finish work	<p>5.1. Finished blinds are checked ensuring stitch length, end finishing and size blinds match work requirements</p> <p>5.2. Work is pressed</p> <p>5.3. Parts of the work which do not comply with work order are repaired</p> <p>5.4. Rings are attached</p> <p>5.5. Gather tapes and gathering lines are pulled up maintaining even fullness in gather and even tension in gathering lines</p> <p>5.6. Headboard is painted, stained or covered with fabric fixed along the board length, corners are mitred and fixed, reducing bulk and ensuring a neat finish</p> <p>5.7. Blinds are fitted to headboard or track and threading completed</p>
6. Complete work for next process	<p>6.1. Workplace required documentation or reporting is completed</p> <p>6.2. Finished work is folded, protected and dispatched following workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, and estimate material requirements
- use pre-checking and inspection techniques to anticipate construction problems, avoid re-working and wastage
- use workplace technology related to the construction of Austrian/festoon style blinds, including tools, equipment, materials and measuring devices

Required knowledge

- types, characteristics, uses and limitations of Austrian/festoon style blinds
- design features of the Austrian/festoon style blinds
- fabric types, common faults and inspection procedures
- identification of equipment, processes and procedures for making the particular blind style
- work requirements, including workplace standards
- risks to health from repetitive actions and prevention strategies

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Identify materials used and any special sewing requirements for the style of blinds
- Apply safe handling practices for equipment, products and materials
- Gather fabrics evenly to meet customer requirements and fabric type
- Construct at least two types of Austrian/festoon style blinds which may be Austrian, festoon, London, balloon and cloud
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment

Resource implications

Appropriate sewing machine, fabrics, work order, workplace information, including work procedures and/or equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment
<p>Blinds to be constructed may include:</p>	<ul style="list-style-type: none"> • Austrian • festoon • London • balloon • cloud and festoon-style curtain types including lace • fabric-lined and unlined blinds
<p>Tools and equipment may include, but are not limited to:</p>	<ul style="list-style-type: none"> • industrial sewing machines • measuring equipment • stapler • drill and saw
<p>Materials to be machined may include but are not limited to:</p>	<ul style="list-style-type: none"> • lining • interlining and curtain fabrics • fasteners • threads
<p>Personal protective equipment</p>	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices</p>

RANGE STATEMENT	
Work order requirements include:	<ul style="list-style-type: none"> • widths and numbers of finished blinds • seam allowances and types • number and widths of panels • lining and any interlining • contrasting edging • required fasteners and other materials • mounting style headboard or track requirements
Machine sewing operations	<p>Machine sewing operations are to ensure:</p> <ul style="list-style-type: none"> • straight stitching along seam lines from the face to the lower edge of the material, • securing of beginning and end of threads • stitching is even and appropriate seam stitch type, length, visibility, • seams are flat • finished components match work requirements
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF3006B Chemically join textiles

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use specialised equipment and processes to bond or glue textiles and timber for the manufacture of items, including bonded blinds and padded pelmets.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify the materials and process	1.1. The process and materials to be used are identified 1.2. The effect of the joining process on the materials is determined 1.3. The effect of the chemical reactions on the materials is determined 1.4. Allowances for joining overlaps are checked in workplace documentation and manufacturer instructions 1.5. Curing times are identified for the materials and the process
2. Plan the joining process	2.1. Manufacturer instructions and workplace procedures for the joining task are used in the planning process 2.2. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.3. Work sequence is planned noting appropriate curing/cooling times, efficient work sequence and quality requirements
3. Set up equipment and materials for the process	3.1. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition 3.2. Site is checked for appropriate ventilation, fume extraction, protection of other surfaces from contamination with screens and or covers 3.3. Adjustments and settings are made to suit materials, manufacturer instructions and workplace procedures 3.4. Appropriate personal protection equipment is selected and assembled
4. Follow workplace procedures to complete the joining process	4.1. Joining procedures are completed following the planned work sequence 4.2. Checks and tests of the process and the finished product are made 4.3. Appropriate adjustments are made to the process to maintain the quality of the finished product 4.4. Workplace documentation and records are completed as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate chemical joining problems, avoid re-working and wastage
- use workplace technology related to chemical joining of textiles, including tools, equipment, materials and measuring devices

Required knowledge

- types, strengths and limitations of chemical joining processes and techniques
- changes in materials during the chemical repair and joining of materials
- testing for potential damage, including dye fastness for the adhesive and materials
- requirements for ventilation and personal protection equipment for the adhesives
- personal health effects of fumes, heat and other radiations

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, interpret and apply information relevant to the chemicals, textiles and timber involved
- Apply safe handling practices for equipment, products and materials
- Select appropriate materials and joining process to match work requirements
- Maintain work area to meet environmental and safety regulations
- Conduct joining process within workplace quality parameters to chemically join at least three different types of textiles
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment

Resource implications

Textiles, timber and joining materials, job sheets.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Chemical joining	This unit covers work involved in the use of solvent and water-based chemicals to join or repair textiles and timber
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the use of chemicals. This may be demonstrated either individually or in a team environment.
Tools and equipment	Tools and equipment may include, but are not limited to glue guns
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Chemical manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of chemicals and machinery • Work instructions • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF3007B Lay out patterns and cut fabrics

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to lay out patterns and cut fabrics for construction of soft furnishing, upholstery products and mattresses and bases.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan work operations	1.1. Specifications, patterns and/or plans are read and interpreted to identify required fabrics, number of items to be cut and required equipment 1.2. Cutting requirements, including bias or other instructions are noted and required guides on the cutting table are identified 1.3. Suitable work area is selected, tidied and cleaned of any contaminants 1.4. Appropriate equipment and tools are selected for the fabrics and type of materials 1.5. Suitable scissors and/or blades are selected for the fabrics to be cut 1.6. Scissors and any other cutting equipment are checked prior to use for appropriate sharpness, set operation and safe condition 1.7. Fabrics are selected in accordance with work order and laid out smooth and square
2. Prepare materials for cutting	2.1. Fabrics are inspected for flaws and appropriate finish 2.2. Naps, direction of pattern, pattern repeat and finished side of the materials are identified 2.3. Fabrics are squared up to the edges or guide markings on the cutting table 2.4. Patterns are laid out following work procedures and instructions using registration points on the pattern and other instructions to match required fabric pattern 2.5. Measurements are made and appropriate adjustments are made 2.6. Tools and equipment are checked for operation
3. Complete cutting operations	3.1. Required cutting operations are completed to cut out materials following work instructions 3.2. Fabrics are wrapped using appropriate protective covers and care label information is attached 3.3. Unused materials are stored as required 3.4. Workplace required documentation is completed and stored following appropriate procedures 3.5. Cut fabrics are folded, protected and dispatched to next process following workplace procedures 3.6. Stock usage is reported as required by workplace procedures

ELEMENT	PERFORMANCE CRITERIA
	3.7. Work area is cleaned and damaged tools tagged as required 3.8. Waste is collected and bundled for recycling/reuse as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use workplace technology related to the layout out of pattern and cutting fabrics, including tools, equipment, materials and measuring devices

Required knowledge

- fabric types, common faults and inspection procedures
- design features of the finished furnishing items in relation to laying out the pattern and cutting the fabrics
- work requirements, including workplace standards
- risks to health from repetitive actions and prevention strategies

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Identify materials used and any special handling requirements for those materials
- Interpret work order and locate and apply relevant information
- Apply safe handling practices for equipment, products and materials
- Lay out patterns and cut out at least five different fabric types or pattern styles
- Identify materials used and any special cutting requirements
- Measure accurately and cut fabrics to required size and accuracy covering at least five different fabric types or pattern styles
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment

Resource implications

Appropriate scissors and tools, fabrics, work order, workplace information, including work procedures and/or equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

EVIDENCE GUIDE	
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • This unit covers work involving cutting single or double layer fabrics by hand or automatic method according to required shape or pattern • The unit applies to plain fabrics as well as those which involve matching stripes, checks and pattern repeats
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the cutting of material. This may be demonstrated either individually or in a team environment.
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • scissors • cutting blades • automatic cutting machines
Materials to be cut may include but are not limited to:	<ul style="list-style-type: none"> • plain and patterned fabric • vinyl and velvet
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices</p>
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, patterns, drawings and designs • Workplace procedures relating to reporting

RANGE STATEMENT	
	and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF3008B Measure up and calculate fabric quantities for window coverings

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to measure up and calculate fabric and tracking quantities for window coverings during a site visit. The information is for subsequent use in job specifications and quotes/tenders.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for calculations	1.1. Measuring and calculating equipment are collected 1.2. Mathematical processes and guide charts required are identified 1.3. Drape requirements, fabric types and lining/interlining requirements are noted from work order
2. Measure windows and calculate drape fabric requirements	2.1. Fabric repeats are noted from samples of customer selected fabrics and recorded 2.2. Fabric width and pattern repeat are noted for work order 2.3. Finished length of window covering is identified for order 2.4. Heading type is identified for order and fullness ratio is identified 2.5. Loose or attached lining preference is noted on work order 2.6. Finished width of tracking and window covering is measured and noted 2.7. Number of fabric drops per curtain is calculated 2.8. Length of each fabric drop is calculated based on finished length plus hem and heading allowances and pattern repeats 2.9. Allowances for seams, hems, headings, drape fullness or heading type are noted for the work order
3. Calculate lining and interlining quantities	3.1. Width of lining and interlining fabrics is noted 3.2. Number of lining/interlining widths or quantity of continuous lining is calculated based on required number of drape drops or continuous fabric 3.3. Length of lining/interlining drops is calculated, including hem allowances 3.4. Amount of lining/interlining fabric is calculated and noted for work order 3.5. Procedures for minimising waste fabric are identified
4. Complete documentation	4.1. Quotation is prepared for client according to workplace procedures 4.2. Documentation is forwarded to appropriate work area

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate measuring and calculation variables
- use workplace technology related to measuring and calculating

Required knowledge

- design features of the fabrics and finished curtains in relation to attractive draping requirements
- fabric types, common faults and inspection procedures
- work requirements, including workplace standards

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Identify materials to be used and any special handling requirements for those materials
- Apply safe handling practices for equipment, products and materials
- Measure up and accurately calculate fabric quantities for at least three different window covering types
- Prepare quotation and/or work order and locate and apply relevant information
- Identify materials to be used and any special requirements
- Follow work instructions to minimise the risk of injury to self or others
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment

Resource implications

Client quotations, work orders, measuring equipment, fabrics, including linings and interlinings, calculator, other relevant equipment.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<p>This unit covers work involved in measuring up and calculations for fabric and lining quantities for all soft furnishings, including:</p> <ul style="list-style-type: none"> • curtains • Austrian • Roman • festoon and other blinds • swags, tails and jabots
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the measurement and calculation of fabric quantities
Tools and equipment may include:	<ul style="list-style-type: none"> • measuring and calculating equipment • including tapes • rulers • calculators and computers
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices</p>
The number of fabric drops per curtain is based on:	<ul style="list-style-type: none"> • useable drapery fabric width • fullness requirements for heading type • size of returns and overlaps • track width identified for customer order

RANGE STATEMENT	
Information and procedures	<ul style="list-style-type: none"> • Manufacturer specifications and operational procedures • Workplace procedures relating to measuring for soft furnishings • Preparation of client quotation, including drawings, plans and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF3009B Manufacture bedspreads

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to produce bedspreads in a range of styles to specifications using industrial sewing machines and equipment.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	1.1. Job requirements are identified from work instructions and patterns 1.2. Pattern is interpreted to determine work specifications 1.3. Instructions for sequencing of work, particular measurements or adjustments are interpreted 1.4. Work sequence is planned, including quality checkpoints
2. Prepare for work	2.1. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.2. Suitable work area is selected for the tasks 2.3. Materials are selected to match customer requirements, suitability for the purpose and the work instructions 2.4. Potential hazards are identified from observation of the tools, equipment, materials and workplace reference material 2.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition
3. Complete construction	3.1. Fabric quantities are calculated, allowing for seams, joining pleats, gathers, etc. 3.2. Fabric is marked out and cut to size 3.3. Bedspread is constructed following work instructions 3.4. Work is checked against patterns and work sheets at the identified checkpoints 3.5. Non-conformity with the required quality standards is rectified
4. Finalise operations	4.1. Completed work is checked against required quality standard 4.2. Documentation or reporting is completed following workplace procedures 4.3. Work area is cleaned, tools and equipment are returned to storage 4.4. Unused materials are returned to storage and waste and scrap is dealt with following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area, estimate bedspread material requirements and other material requirements
- use pre-checking and inspection techniques to anticipate manufacturing problems, avoid re-working and wastage
- use the limited workplace technology related to the manufacture of bedspreads, including tools, equipment, materials and measuring devices

Required knowledge

- basic bedspread styles and variations
- the standard range of bedspread sizes
- the range of fabrics and decorative finishes used in the making of bedspreads
- the interpretation of patterns
- identification of equipment, processes and procedures
- workflow in relation to bedspread production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Identify materials used in bedspread manufacture, and any special sewing or handling requirements for those materials
- Apply safe handling practices for equipment, products and materials
- Interpret work order and patterns and locate and apply relevant information
- Interpret patterns and work instructions
- Select and use tools and equipment appropriate to the task
- Manufacture at least three different styles of bedspread
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment

Resource implications

Patterns, materials, tools and equipment.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit covers work involving the production of bedspreads, including quilted, lined and unlined styles by reading and interpreting patterns, plans and work instructions
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the reading and interpreting of plans and instructions. This may be demonstrated either individually or in a team environment
Tools and equipment may include:	<ul style="list-style-type: none"> • measuring and calculating equipment, including tapes, rulers, calculators, computers • fabric cutting and sewing tools, including scissors, sewing machines, hemming machines, overlockers, etc.
Materials	Materials may include plain and patterned fabric and decorative trims
Pattern interpretation is to determine the following:	<ul style="list-style-type: none"> • type of materials specified • decorative finishes to be applied • required tools and equipment for the task • number and size of bedspreads to be produced • quality requirements
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulation and

RANGE STATEMENT	
	enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the production of bedspreads • Machine manufacturers' specifications and operational procedures • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF3010B Manufacture bed linen and table cloths

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to produce bed linen and table cloths in a range of styles to specifications using industrial sewing machines and equipment.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	1.1. Job requirements are identified from work instructions and patterns 1.2. Patterns are interpreted to determine work specifications 1.3. Instructions for sequencing of work, particular measurements or adjustments are interpreted 1.4. Work sequence is planned, including quality checkpoints
2. Prepare for work	2.1. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.2. Suitable work area is selected for the tasks 2.3. Materials are selected to match customer requirements, suitability for the purpose and the work instructions 2.4. Potential hazards are identified from observation of the tools, equipment, materials and workplace reference material 2.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition
3. Complete manufacture	3.1. Fabric quantities are calculated, allowing for seams, joining pleats and gathers 3.2. Fabric is marked out and cut to size 3.3. Bed linen and table cloths are manufactured following work instructions 3.4. Work is checked against patterns and work sheets at the identified checkpoints 3.5. Non-conformity with the required quality standards is rectified
4. Finalise operations	4.1. Completed work is checked against required quality standard 4.2. Documentation or reporting is completed following workplace procedures 4.3. Work area is cleaned, tools and equipment are returned to storage 4.4. Unused materials are returned to storage and waste and scrap is dealt with following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, and estimate material requirements
- use pre-checking and inspection techniques to anticipate manufacturing problems, avoid re-working and wastage
- use the limited workplace technology related to the manufacture of bed linen and table cloths, including tools, equipment, materials and measuring devices

Required knowledge

- the process for interpretation of patterns
- basic bed linen styles and variations
- basic table cloth styles and variations and table cloth sizes
- the standard range of bed linen sizes
- the range of fabrics and decorative finishes used in the making of bed linen and table cloths
- identification of equipment, processes and procedures
- workflow in relation to bed linen and table cloth production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Identify materials used in bed linen and table cloths manufacture, and any special sewing or handling requirements for those materials
- Apply safe handling practices for equipment, products and materials
- Interpret work order and locate and apply relevant information
- Interpret patterns and work instructions
- Select and use tools and equipment appropriate to the task
- Produce at least three different types of bed linen or table cloths which must include a duvet cover and a bed valance
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment

Resource implications

Patterns, materials, tools and equipment.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment,

EVIDENCE GUIDE

materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> This unit covers work involving the production of bed linen and table cloths by reading and interpreting patterns, plans and work instructions Bed linen may include duvet covers, sheets, pillow cases and bed valances
Unit context	<ul style="list-style-type: none"> OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements Work requires individuals to demonstrate discretion, judgement and problem solving skills in the reading and interpreting of patterns, plans and instructions. This may be demonstrated either individually or in a team environment
Tools and equipment may include:	<ul style="list-style-type: none"> measuring and calculating equipment, including tapes, rulers, calculators, computers fabric cutting and sewing tools, including scissors, sewing machines, hemming machines and overlockers
Materials may include:	<ul style="list-style-type: none"> plain and patterned fabric decorative trims and fasteners
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices</p>
Information and procedures	<ul style="list-style-type: none"> Workplace procedures relating to the production of bed linen and table cloths

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Work instructions, including job sheets, patterns, plans, drawings and designs • Workplace procedures relating to reporting and communication
Pattern interpretation is to determine the following:	<ul style="list-style-type: none"> • type of materials required • decorative finishes to be applied • required tools and equipment for the task • number and size of bed linen and table cloths to be produced • quality requirements

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF3011B Advise customers on interior decoration

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to advise customers on colour coordination, fabric selection and styles in relation to soft furnishings.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	1.1. Job requirements are identified from customer's initial instructions or enquiries and work instructions 1.2. Potential site problems or site specific requirements are identified 1.3. Work sequence is planned, including quality checkpoints
2. Prepare for work	2.1. A range of materials and products are selected to match customer requirements, suitability for the purpose and work instructions 2.2. Sample materials, products and visual aids are collected 2.3. An appointment is arranged with the customer and an appropriate time plan is agreed
3. Confirm customer requirements	3.1. Questioning and active listening techniques are used to clarify customer needs 3.2. Customer requirements are identified professionally, courteously, with tact and without presumptions 3.3. Customer requirements are fed back accurately in language that can be understood by the customer and enterprise staff 3.4. Customer requirements are documented in accordance with relevant industry, legal and/or enterprise standards and procedures
4. Provide advice on interior decoration options	4.1. Viable options for colour, fabric and design that are relevant to the customer's requirements are generated 4.2. Relevant suppliers are contacted to research alternative options, if required 4.3. Options for colour, fabric and design are explained to and discussed with the customer to facilitate customer understanding 4.4. Fabric or product samples and/or visual aids are made available to the customer, where appropriate, to facilitate customer understanding 4.5. Benefits and approximate costs of each option are explained to the customer to facilitate informed decision making
5. Agree selection with customer	5.1. Customer preferred option, including agreed delivery timeframe, is determined 5.2. Customer commitment to agreed option is gained, in accordance with workplace requirements

ELEMENT	PERFORMANCE CRITERIA
	5.3. Documentation is completed following workplace procedures, including any required specification sheets for products selected (eg colour, fabric, style, track type) and drawings 5.4. Assistance with any paperwork requiring completion by customer is provided where appropriate
6. Finalise process	6.1. Sample products are returned to storage as required 6.2. Contact is maintained with customer throughout manufacture and installation process, if required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, and current trends and styles in interior decoration
- communicate ideas and information to enable confirmation of requirements and specifications, coordination of ideas with customers, and the gaining of the customer's confidence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any backtracking, advisory services
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- apply analytical techniques to many customer requirements with preferred options
- use workplace technology related to locating and analysing options for the client

Required knowledge

- interpretation of plans and work sheets
- colour coordination and matching
- fabric types and applications
- current trends in soft furnishing styles

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Identify products and materials used in interior decoration, and any special handling requirements for those materials • Interpret work order and locate and apply relevant information • Interpret plans and work instructions • Advise customers on at least three occasions involving both fabric and colour selections • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
<p>Resource implications</p>	<p>Sample fabrics and products, visual aids, tools and equipment.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit covers work involving providing advice to customers on colour coordination, fabric selection and styles in relation to soft furnishings
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in determining customer and site requirements. This may be demonstrated either individually or in a team environment.
Tools and equipment may include:	<ul style="list-style-type: none"> • measuring and calculating equipment • including tapes • rulers • calculators • computers
Materials may include:	<ul style="list-style-type: none"> • product and fabric samples • and visual aids (photographs • magazines • trade brochures • sketches
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to customer service

RANGE STATEMENT

	<ul style="list-style-type: none"> • Product manufacturer specifications and operational procedures • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication
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Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF3012B Install motorised curtains and blinds

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to install motorised curtains and blinds.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify products, fittings and attachments to be used	1.1. Type of motorised curtain or blind to be installed is identified from work order 1.2. Required materials and tools are identified from work instructions and (where necessary) site inspection 1.3. Location of available power point is checked for suitability 1.4. Installation of power point in suitable location is arranged (if required)
2. Plan process for fitting	2.1. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.2. Appropriate equipment is identified to minimise risks of damage to customers' premises or injuries to self 2.3. Manufacturers' information on products used is located and used to plan work 2.4. Attachment process is planned to conform to quality requirements, minimise time, economically use materials and maximise appearance of the finished work 2.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition
3. Complete fitting operations	3.1. Work plan is followed ensuring compliance with workplace procedures and OH&S requirements 3.2. Tracks or blinds are installed and tested for correct operation 3.3. Curtains are attached to tracks and checked for smooth and even operation and hanging, including limits 3.4. Curtain or blind height and floor clearance is checked and compared to work order requirement
4. Clean work area	4.1. Work site and any equipment used is cleaned and stored appropriately 4.2. Unserviceable equipment is tagged, faults are identified and appropriate personnel are informed 4.3. Completed work is inspected and compared to workplace quality requirements

ELEMENT	PERFORMANCE CRITERIA
	4.4. Fittings, curtains and blinds which do not meet quality specifications are repaired on-site or returned to the workroom for repair 4.5. Appropriate documentation or reporting is completed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate motor requirements and other material requirements
- use pre-checking and inspection techniques to anticipate installation problems, avoid re-working and wastage
- use the limited workplace technology related to the installation of motorised systems, including tools, equipment, materials and measuring devices

Required knowledge

- basic low voltage motor theory
- types, characteristics, uses and limitations of motorised curtain systems
- identification of equipment, processes and procedures
- workflow in relation to fitting electric motors, curtains, blinds and tracks

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Interpret work order and locate and apply relevant information • Apply safe handling practices for equipment, products and materials • Follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> • minimise the risk of injury to self and others • prevent damage to goods, equipment and products • maintain required production output and product quality • Install at least two different types of motorised curtains or blinds, including at least one curtain and one blind • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
<p>Resource implications</p>	<p>Motors, curtains, tracks, tools and equipment, appropriate quality specifications and instructions.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	<ul style="list-style-type: none"> • This unit covers work involved in the fitting and adjustment of tracked window coverings that are electrically operated • Motorised curtains and blinds may include battery or plug-in mains power operated curtains or blinds
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines. This may be demonstrated either individually or in a team environment.
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • hand or power operated tools • including drills • hammers • screwdrivers
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSF3013B Follow patterns to produce soft furnishing accessories

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to produce soft furnishing accessories such as cushions, tie backs, bolsters and other decorative items, following the requirements of patterns.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	1.1. Job requirements are identified from work instructions and patterns 1.2. Pattern is interpreted to determine work specifications 1.3. Instructions for sequencing of work, particular measurements or adjustments are interpreted 1.4. Work sequence is planned, including quality checkpoints
2. Prepare for work	2.1. OHS requirements, including ergonomic criteria and personal protection needs, are observed throughout the work 2.2. Suitable work area is selected for the tasks 2.3. Materials are selected to match customer requirements, suitability for the purpose and the work instructions 2.4. Potential hazards are identified from observation of the tools, equipment, materials and workplace reference material 2.5. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition
3. Complete production	3.1. Soft furnishing accessories are produced following work instructions 3.2. Work is checked against patterns and work sheets at the identified checkpoints 3.3. Non-conformity with the required quality standards is rectified
4. Finalise operations	4.1. Completed work is checked against required quality standard 4.2. Documentation or reporting is completed following workplace procedures 4.3. Work area is cleaned, tools and equipment are returned to storage 4.4. Unused materials are returned to storage and waste and scrap is dealt with following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate production problems, avoid re-working and wastage
- use the limited workplace technology related to the production of accessories, including tools, equipment, materials and measuring devices

Required knowledge

- the types, characteristics and production requirements for soft furnishing accessories
- the process for the interpretation of patterns
- identification of equipment, processes and procedures
- workflow in relation to soft furnishing accessory production

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Identify materials used and any special sewing or handling requirements for those materials
- Interpret work order and patterns and locate and apply relevant information
- Apply safe handling practices for equipment, products and materials
- Produce at least three different types of soft furniture accessories, which are to include a padded, piped and shaped tie back, a piped cushion and a bolster.
- Select and use tools and equipment appropriate to the task
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment
- Report process or materials faults, damaged products or equipment

Resource implications

Patterns, materials, tools and equipment.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit scope</p>	<ul style="list-style-type: none"> • This unit covers work involving the production of soft furnishing accessories by reading and interpreting patterns, plans and work instructions • Soft furnishings may include: <ul style="list-style-type: none"> • cushions • tie-backs • bolsters • soft tableware and slip-on covers
<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the reading and interpreting of patterns, plans and instructions. This may be demonstrated either individually or in a team environment
<p>Tools and equipment may include:</p>	<ul style="list-style-type: none"> • measuring and calculating equipment, including tapes, rulers, calculators, computers • fabric and general cutting and sewing tools, including scissors, saws, drills, staplers, sewing machines, hemming machines, overlockers, glue guns
<p>Materials may include:</p>	<ul style="list-style-type: none"> • plain and patterned fabric • velvet • vinyl

RANGE STATEMENT	
	<ul style="list-style-type: none"> • piping cords • wadding • foam • zips and fasteners
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the production of soft furnishing items • Work instructions, including job sheets, patterns, plans, drawings and designs • Workplace procedures relating to reporting and communication
Pattern interpretation is to identify or determine:	<ul style="list-style-type: none"> • type of material specified • required tools and equipment for the task • number and type of soft furnishing accessories to be produced • and quality requirements

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFSF3014B Provide technical advice to customers

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to provide advice to customers on a range of technical issues that impact on soft furnishings.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify customer requirements	<p>1.1. Questioning techniques are applied to determine the nature of customer requirements</p> <p>1.2. Potential site problems or site specific requirements are identified</p>
2. Access and interpret information	<p>2.1. All available information relating to customer-specific requirements is gathered, recorded and confirmed with the customer</p> <p>2.2. Information on options that potentially meet the customer's requirements is accessed and interpreted</p>
3. Provide advice to customer	<p>3.1. Viable options relating to products, techniques or solutions that are relevant to the customer's requirements are generated</p> <p>3.2. Information on available options relating to products, techniques or solutions is provided to the customer</p> <p>3.3. Features, benefits, limitations and safety implications relating to available options are explained to the customer</p> <p>3.4. The customer is advised to seek specialist advice where warranted</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, and current trends and styles in interior decoration
- communicate ideas and information to enable confirmation of requirements and specifications, coordination of ideas with customers, and the gaining of the customer's confidence
- plan and organise activities, including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, advisory services
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- apply analytical techniques to many customer requirements with preferred options
- use workplace technology related to locating and analysing options for the client

Required knowledge

- interpretation of plans, drawings and work sheets
- interior design principles
- types of motorisation
- energy conservation methods
- types of wall and ceiling construction
- identification of equipment, processes and procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Interpret work order and locate and apply relevant information • Interpret plans, drawings and work instructions • Select and use tools and equipment appropriate to the task • Provide advice to customers on three occasions with each involving a different central subject • Follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> • complete required workplace documentation • gather and interpret information on customer requirements and needs • minimise the risk of injury to self and others • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment • Identify safe handling practices for equipment, products and materials
<p>Resource implications</p>	<p>Sample products, visual aids, tools and equipment.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and will generally be in conjunction with assessment of other units of competency.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit covers work involving providing advice to customers in relation to technical issues that impact of soft furnishings, including wall structures, interior design, motorisation, energy conservation and architectural drawings
Unit context	<ul style="list-style-type: none"> • OHS requirements may include legislation, building codes, material safety management systems, hazardous and dangerous goods codes and local safe operating procedures or equivalent • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate discretion, judgement and problem solving skills in determining customer and site requirements. This may be demonstrated either individually or in a team environment
Tools and equipment may include:	<ul style="list-style-type: none"> • measuring and calculating equipment, including tapes, rulers, calculators, computers
Materials may include:	<ul style="list-style-type: none"> • product and fabric samples • visual aids (photographs, magazines, trade brochures, sketches, etc.) • technical drawings
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to customer service • Product manufacturer specifications and operational procedures

RANGE STATEMENT	
	<ul style="list-style-type: none"> • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Soft Furnishing
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSL2001A Assemble lead light and stained glass components

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the assembly of lead light and stained glass components
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in lead light and stained glass operations of all sizes. The assembly of leadlight and stained glass components applies to a workshop environment and involves application of skills and knowledge at a production worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	<p>1.1. Applicable OHS, legislative and organisational requirements relevant to the assembly of lead light and stained glass components are verified and complied with</p> <p>1.2. Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement</p> <p>1.3. Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use</p> <p>1.4. Workplace environment considerations are identified and measures to reduce noise, dust and obstacles are applied</p> <p>1.5. Assembly sequence is planned</p> <p>1.6. Fixing and joining devices are selected in line with work instructions and type of materials to be joined</p> <p>1.7. Jigs are selected and checked for suitability of purpose</p>
2. Assemble components	<p>2.1. Components are laid out and assembled using jigs and appropriate fastenings</p> <p>2.2. Hand and/or power tools, equipment are used as required</p> <p>2.3. Assembled work is checked for compliance with specifications</p> <p>2.4. Components are prepared, assembled and fitted as per specification</p> <p>2.5. Work which does not meet quality specifications is repaired or tagged for further processing or recycling/disposal</p> <p>2.6. Finished products are organised and stored in holding area</p>
3. Clean work area/s and maintain equipment	<p>3.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures</p> <p>3.2. Waste and scrap is removed following workplace procedures</p> <p>3.3. Tools and equipment used is cleaned; inspected for serviceable condition and stored appropriately in accordance with workplace procedures</p> <p>3.4. Equipment and work area clean-up is maintained in</p>

ELEMENT	PERFORMANCE CRITERIA
	accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand materials technology and information related to leadlight and stained glass components
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to leadlight and stained glass components
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in leadlight and stained glass components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, estimate work and material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of leadlight and stained glass components
- seek learning opportunities
- use the workplace technology related to leadlight and stained glass components including computers, measuring devices and recording systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for manufacturing and installing security screens and grills
- organisational and site standards, requirements, policies and procedures for component assembly
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and

REQUIRED SKILLS AND KNOWLEDGE

maintenance

- | |
|--|
| <ul style="list-style-type: none">• characteristics of lead light and stained glass components and materials used in assembly• procedures for the recording, reporting and maintenance of workplace records and information |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Location, interpretation and application of relevant information, standards and specifications
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for component assembly
- Communicate effectively and work safely with others in the work area
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self or others
 - prevent damage to components, equipment and products
 - maintain required production output and product quality
- Safe and effective operational use of tools and equipment
- Assemble a range of lead light and stained glass components

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to assembly of lead light and stained glass components
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
Assessment methods must confirm consistency and

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Components	<ul style="list-style-type: none"> may include, but are not limited to panels, door inserts, frames and limited basic end items
Tools and equipment	<ul style="list-style-type: none"> may include benches, light boxes, glass grinders, lead knives, lead vice, lathekins,

RANGE STATEMENT	
	farriers nails, glass cutters, grozing and small running pliers, soldering irons and bits, suede, cleaning and polishing brushers and pickers
Materials	<ul style="list-style-type: none"> may include but are not limited to coloured/plain glass panels, patterns/templates, timber lathes, ornamental fittings, lead came, solder and fluxes

Unit Sector(s)

Unit sector	Lead Light and Stained Glass
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSL3001A Apply product and material knowledge to lead light and stained glass operations

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency required to apply product and material knowledge to stained glass and leadlight operations by identifying types of glass and other materials used in the leadlight and stained glass industry, their characteristics, properties, uses and limitations.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in leadlight and stained glass operations. The application of product and material knowledge to leadlight and stained glass operations applies to a workshop environment and involves application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the individual's job and authority
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and respond to glass and material properties	1.1. Applicable OHS, legislative and organisational requirements relevant to lead light and stained glass operations are verified and complied with 1.2. The types of glass and inherent characteristics are analysed to select the optimum glass for the product 1.3. The characteristics and properties of lead light and stained glass are identified and considered 1.4. The properties and impacts of metals are identified and considered
2. Apply visual evaluation techniques to glass products	2.1. Correct visual procedures using natural and artificial light are followed 2.2. Characteristics of the glass styles are explained 2.3. Glass is identified according to style 2.4. The quality and style of the glass are evaluated ensuring conditions for evaluation are as favourable as possible
3. Identify basic faults	3.1. Basic glass faults are recognised 3.2. Other faults are recognised
4. Respond to the impact of the glass properties	4.1. The cause and effects on the glass of age is considered and responded to 4.2. The cause and effects on the glass of structural insecurity is considered and responded to 4.3. The cause and effect of weather extremes are considered and responded to 4.4. Records are maintained

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand materials technology and information related to leadlight and stained glass products
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to leadlight and stained glass operations
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in leadlight and stained glass components
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, estimate glass requirements and estimate other material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of leadlight and stained glass techniques
- seek learning opportunities
- use the workplace technology related to the selection and assembly of leadlight and stained glass components, including computers, measuring devices and assembly systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for lead light and stained glass operations
- lead light and stained glass construction terminology and techniques
- lead light and stained glass operations repair terminology and techniques
- lead light and stained glass operations types, characteristics, production methods and faults
- organisational and site standards, requirements, policies and procedures for lead

REQUIRED SKILLS AND KNOWLEDGE

light and stained glass operations

- types of glass and other materials used in the lead light and stained glass industry, their characteristics, properties, uses and limitations
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Read and interpret a work/job specification
- Identify a range of lead light and stained glass types, and detail their uses and limitations
- Identify and explain the properties of lead light and stained glass
- Explain the likely effects of a range of faults on lead light and stained glass products
- Identify the likely impact of various environmental effects on lead light and stained glass products
- Demonstrate the application of product and material knowledge in two differing leadlight and stained glass operations
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for lead light and stained glass operations
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - examples of lead light and stained glass
 - samples of metals

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of

EVIDENCE GUIDE

underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Types of glass	<ul style="list-style-type: none"> may include clear, coloured, stained
Metals	<ul style="list-style-type: none"> used in lead light and stained glass may include lead and copper

RANGE STATEMENT	
Glass faults	<ul style="list-style-type: none"> may include but are not limited to cracking, fading, slumping
Other faults	<ul style="list-style-type: none"> may include but are not limited to oxidation, breakage, structural insecurity
Records and reports	<ul style="list-style-type: none"> may include but not be limited to the product type, size, inspection, inspection outcomes, quality outcomes and storage locations

Unit Sector(s)

Unit sector	Lead Light and Stained Glass
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSL3002A Paint glass

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to apply patterns and/or designs to glass with vitreous paints.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in leadlight and stained glass operations. The requirement to paint glass applies to a workshop environment and involves application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify painting requirements	1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to lead light and stained glass operations are verified and complied with 1.2. Types and quantities of <i>patterns, designs</i> and <i>materials</i> required are identified from plans or work instructions 1.3. The process for painting patterns and designs onto glass is identified
2. Prepare to paint glass	2.1. Painting sequence is determined in a logical order to suit the job 2.2. <i>Tools, equipment</i> and materials are selected and checked prior to use to ensure that they are appropriate for the painting, serviceable and in a safe condition 2.3. Patterns and design templates are checked against specifications or job order 2.4. Paint colours are matched against the plan or work order 2.5. Glass is <i>prepared</i> for painting
3. Apply vitreous paint	3.1. Paint is applied to the glass surface in accordance with the pattern or design template 3.2. Problems occurring during the painting operation are identified and rectified
4. Finalise the installation	4.1. Painted glass is inspected for quality of work and repaired or discarded as required 4.2. Waste and scrap material is removed for disposal/recycling as required 4.3. Work area is cleaned and rubbish disposed of as appropriate 4.4. Tools, equipment and unused materials are cleaned and removed and stored appropriately 4.5. Workplace <i>records</i> are maintained

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand materials technology and information related to the painting of glass
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to painting of glass
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in the painting of glass
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, estimate work and material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of painting of glass
- seek learning opportunities
- use the workplace technology related to the painting of glass including computers, measuring devices and recording systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the painting of glass for lead light and stained glass operations
- glass painting terminology and techniques
- organisational and site standards, requirements, policies and procedures for the painting of glass
- types of glass and other materials used in the lead light and stained glass industry, their characteristics, properties, uses and limitations
- types of vitreous paints, their characteristics, properties, uses and limitation
- environmental protection requirements relating to the disposal of waste material

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• established communication channels and protocols• problem identification and resolution• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit:

- Read and interpret a work/job specification
- Identify a range of glass suitable for painting, detailing their uses and limitations
- Identify and explain the properties and limitations of vitreous paints
- Identify the likely impact of various environmental effects on painted glass
- Paint glass using freehand and template processes
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the painting of glass with vitreous paints
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to painting glass with vitreous paints
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of

EVIDENCE GUIDE

tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Patterns and designs	<ul style="list-style-type: none"> may include freehand or computer drawn templates, artwork to be copied, designs to be copied and other patterns
Materials	<ul style="list-style-type: none"> may include but are not limited to clear or coloured glass, vitreous paints, and masking

RANGE STATEMENT	
	materials.
Tools and equipment	<ul style="list-style-type: none"> may include work benches, light tables, paint brushes and other applicators and general hand tools
Preparation	<ul style="list-style-type: none"> may include cleaning, marking, masking and applying templates
Records	<ul style="list-style-type: none"> may include but not be limited to the product type, size, inspection, inspection outcomes, quality outcomes and storage locations

Unit Sector(s)

Unit sector	Lead Light and Stained Glass
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSL3003A Fire glass

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to achieve specific outcomes through the firing of glass
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in leadlight and stained glass operations. The requirement to fire glass applies to a workshop environment and involves application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify firing requirements	1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to lead light and stained glass operations are verified and complied with 1.2. Types and quantities of <i>materials</i> required are identified from plans or work instructions 1.3. The process for achieving <i>specific outcomes</i> through the firing of glass is identified
2. Prepare to fire glass	2.1. Firing sequence is determined in a logical order to suit the job 2.2. Kiln, <i>tools, equipment</i> and materials are selected and checked prior to use to ensure that they are appropriate for the firing, serviceable and in a safe condition 2.3. Kiln components and controls including emergency stops and guards are identified and checked for correct operation 2.4. Glass is <i>prepared</i> for firing
3. Conduct firing operations	3.1. Kiln equipment is operated, adjusted and monitored to ensure correct product quality and output 3.2. Problems occurring during the firing operation are identified and rectified
4. Finalise the installation	4.1. Fired glass is inspected for quality of work and repaired or discarded as required 4.2. Waste and scrap material is removed for disposal/recycling as required 4.3. Work area is cleaned and rubbish disposed of as appropriate 4.4. Tools, equipment and unused materials are cleaned and removed and stored appropriately 4.5. Workplace <i>records</i> are maintained

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand materials technology and information related to the firing of glass
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to firing of glass
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in the firing of glass
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, estimate work and material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of firing of glass
- seek learning opportunities
- use the workplace technology related to the firing of glass including computers, measuring devices and recording systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for lead light and stained glass firing operations
- glass firing terminology and techniques
- operation of glass firing kiln
- organisational and site standards, requirements, policies and procedures for the firing of glass
- types of glass and other materials used in the lead light and stained glass industry, their characteristics, properties, uses and limitations

REQUIRED SKILLS AND KNOWLEDGE

- characteristics and properties of semi-molten glass
- firing techniques to achieve specific outcomes
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Read and interpret a work/job specification
- Identify a range of glass suitable for firing, detailing their uses and limitations
- Identify and explain the properties and limitations of semi-molten glass
- Identify the likely impact of various environmental effects on fired glass
- Fire glass to achieve required outcomes
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the painting of glass with vitreous paints
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to firing glass
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning

EVIDENCE GUIDE

knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Materials

- may include but are not limited to clear, coloured and painted glass, bedding sand, marking and masking materials.

Specific outcomes

- may include glass staining and forming

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> • may include firing kiln, work benches and general hand tools
Preparation	<ul style="list-style-type: none"> • may include cleaning, marking and masking
Records	<ul style="list-style-type: none"> • may include but not be limited to the product type, size, inspection, inspection outcomes, quality outcomes and storage locations

Unit Sector(s)

Unit sector	Lead Light and Stained Glass
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSL3004A Protect stained glass and lead lighting

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to protect stained glass and lead lighting
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in leadlight and stained glass operations. The requirement to stained glass and lead lighting applies to a workshop and on site environment and involves application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify protection requirements	1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to lead light and stained glass operations are verified and complied with 1.2. The process for achieving <i>protection</i> of stained glass and lead lighting is identified 1.3. Types and quantities of <i>materials</i> required for the protection of stained glass and lead lighting are identified from plans or work instructions
2. Prepare to protect stained glass and lead lighting	2.1. Work sequence is determined in a logical order to suit the job 2.2. <i>Tools, equipment</i> and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition
3. Install protection	3.1. Protection materials are cut shaped and formed to ensure correct size and application 3.2. Protection materials are installed or fitted 3.3. Problems occurring during the operation are identified and rectified
4. Finalise the installation	4.1. Protected glass is inspected for quality of work and repaired as required 4.2. Waste and scrap material is removed for disposal/recycling as required 4.3. Work area is cleaned and rubbish disposed of as appropriate 4.4. Tools, equipment and unused materials are cleaned and removed and stored appropriately 4.5. Workplace <i>records</i> are maintained

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand materials technology and information related to the protection of leadlight and stained glass
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to the protection of leadlight and stained glass
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in the protection of leadlight and stained glass
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, estimate work and material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of the protection of leadlight and stained glass
- seek learning opportunities
- use the workplace technology related to the protection of leadlight and stained glass including computers, measuring devices and recording systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for lead light and stained glass operations
- stained glass and lead lighting protection terminology and techniques
- organisational and site standards, requirements, policies and procedures for the protection of glass
- types of glass and other materials used in the lead light and stained glass industry, their characteristics, properties, uses and limitations
- characteristics and properties of materials used in the protection of stained glass

REQUIRED SKILLS AND KNOWLEDGE

and lead lighting

- | |
|---|
| <ul style="list-style-type: none">• environmental protection requirements relating to the disposal of waste material• established communication channels and protocols• problem identification and resolution• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement |
|---|

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Read and interpret a work/job specification
- Identify a range of protection methods, detailing their uses and limitations
- Identify and explain the properties and limitations of protection materials
- Identify the likely impact of various environmental effects on protected stained glass and lead lighting
- Protect stained glass and lead light to achieve required outcomes
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the painting of glass with vitreous paints
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to protecting stained glass and lead lighting
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

EVIDENCE GUIDE

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Protection

- may include the requirement for security, protection from vandalism, protection from environmental reasons and protection for heritage reasons
- may include the use of protective films, wire

RANGE STATEMENT	
	barriers, double glazing and other glass panelling <ul style="list-style-type: none"> • may be limited due to aesthetic reasons
Materials	<ul style="list-style-type: none"> • may include but are not limited to protective film, wire meshing, double glazed panels, armoured glass and the materials required to apply or install these
Tools and equipment	<ul style="list-style-type: none"> • may include work benches, squeegees and holsters, cutting and glazing tools, electric and pneumatic portable power tools, saws, drills and portable compressors and general hand tools
Records	<ul style="list-style-type: none"> • may include but not be limited to the product type, size, inspection, inspection outcomes, quality outcomes and storage locations

Unit Sector(s)

Unit sector	Lead Light and Stained Glass
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSL3005A Fabricate and install residential lead light and stained glass windows and doors

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to plan, fabricate and install residential lead light and stained glass windows and doors.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in leadlight and stained glass operations. The requirement to plan, fabricate and install residential lead light and stained glass windows and doors applies to a workshop and onsite environment and involves application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan to fabricate and install	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to lead light and stained glass operations are verified and complied with</p> <p>1.2. The process for fabricating and installing lead light and stained glass <i>windows</i> and <i>doors</i> is identified</p> <p>1.3. Types and quantities of <i>materials</i> required are calculated from plans or work instructions or by measuring the fixture opening</p> <p>1.4. Cutting lists are prepared from plans, work instructions or measurements of opening to suit the window or door to be installed</p> <p>1.5. Fittings, fixings and joining devices or materials are selected</p> <p>1.6. <i>Tools and equipment</i> appropriate to the fixing method are identified</p>
2. Prepare to fabricate and install	<p>2.1. Work sequence is determined in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Components of the lead light and stained glass window or door are checked against specifications or job order</p>
3. Fabricate and install	<p>3.1. Materials are cut to cutting list requirements</p> <p>3.2. Components of lead light and stained glass window or door are assembled</p> <p>3.3. Fittings are installed to window or door in accordance with workplace procedures or industry practice</p> <p>3.4. Window or door is installed</p>
4. Finalise the installation	<p>4.1. Installed window or door is inspected for quality of work and repaired, re-fabricated or re-installed as required</p> <p>4.2. Waste and scrap material is removed for disposal/recycling as required</p> <p>4.3. Work area is cleaned and rubbish disposed of as appropriate</p> <p>4.4. Tools, equipment and unused materials are cleaned and removed and stored appropriately</p>

ELEMENT	PERFORMANCE CRITERIA
	4.5. Workplace <i>records</i> are maintained

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand materials technology and information related to the fabrication and installation of residential lead light and stained glass
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to the fabrication and installation of residential lead light and stained glass
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in the fabrication and installation of residential lead light and stained glass
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, estimate work and material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of the fabrication and installation of residential lead light and stained glass
- seek learning opportunities
- use the workplace technology related to the fabrication and installation of residential lead light and stained glass including computers, measuring devices and recording systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for lead light and stained glass operations
- lead light and stained glass windows and doors construction terminology and techniques
- organisational and site standards, requirements, policies and procedures for fabrication and installation of lead light and stained glass windows and doors

REQUIRED SKILLS AND KNOWLEDGE

- types of glass and other materials used in the lead light and stained glass industry, their characteristics, properties, uses and limitations
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Read and interpret a work/job specification • Identify a range of lead light and stained glass windows and doors detailing their uses and limitations • Identify and explain the properties of lead light and stained glass windows and doors • Identify the likely impact of various environmental effects on lead light and stained glass windows and doors • Fabricate and install residential lead light and stained glass window and residential lead light and stained glass door • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the fabrication and installation of lead light and stained glass windows and doors • Communicate effectively and work safely with others in the work area
<p>Context of, and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to fabricating and installing lead light and stained glass windows or doors • specifications and work instructions
<p>Method of assessment</p>	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and</p>

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Windows	<ul style="list-style-type: none"> may include sliding, double hung, casement and awning windows and double glazed windows
Doors	<ul style="list-style-type: none"> may include sliding, hinged and bi-fold doors

RANGE STATEMENT	
Materials	<ul style="list-style-type: none"> • may include but are not limited to aluminium alloys and steel, fasteners, plastics, sealants, tapes, vinyl's, gaskets, timber reveals and flashings • may include hardware includes locks, wheels, stays, hinges, springs and balances and any component required for the operation of residential windows and doors • may include lead lighting or stained glass panels, annealed glass, safety glass, patterned glass, tinted, heat reflective and insulated glass units
Tools and equipment	<ul style="list-style-type: none"> • may include assembly benches, drop and up-cut saws, pneumatic, hydraulic and manual presses, frame and sash tooling, copy routers, end millers, crimpers, electric and pneumatic powered drills and screwdrivers, pop rivet guns, glue guns and general hand tools
Records	<ul style="list-style-type: none"> • may include but not be limited to the product type, size, inspection, inspection outcomes, quality outcomes and storage locations

Unit Sector(s)

Unit sector	Lead Light and Stained Glass
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFSL3006A Prepare and install architectural engineered lead light and stained glass

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to prepare and install leadlight and stained glass in structural and other architecturally engineered applications.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in leadlight and stained glass operations. The requirement to prepare and install leadlight and stained glass in structural and other architecturally engineered applications applies to a workshop and onsite environment and involves application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to lead light and stained glass operations are verified and complied with</p> <p>1.2. Work requirements in the form of type of lead light and stained glass, frames and the method of fixing are identified confirmed and clarified with <i>appropriate personnel</i></p> <p>1.3. The process for preparing and installing <i>architecturally engineered lead light and stained glass</i> is identified</p>
2. Prepare to install	<p>2.1. Work sequence is determined in a logical order to suit the job</p> <p>2.2. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>2.3. Components of the lead light and stained glass are checked against specifications or job order</p> <p>2.4. Lead light and stained glass fixing method is selected</p> <p>2.5. Frame or opening is prepared to receive lead light and stained glass</p> <p>2.6. Fixing and sealing materials are prepared by mixing or cutting to length as appropriate</p>
3. Identify site conditions and restraints	<p>3.1. Site safety hazards are recognised and corrective action taken to reduce injury to self and others</p> <p>3.2. On-site difficulties are identified and addressed in accordance with regulations and enterprise agreements</p> <p>3.3. Special characteristics of the lead light and stained glass aperture are identified in relation to the effect of the fitting process on the finished job</p> <p>3.4. Covering material is applied where necessary to protect existing fixtures and fittings</p>
4. Fit lead light and stained glass	<p>4.1. Lead light and stained glass is fixed to the frame or opening using the selected method</p> <p>4.2. Solvents and sealants are applied</p> <p>4.3. Lead light and stained glass and/or frame are cleaned after fixing</p>
5. Finalise the	<p>5.1. Completed installation is checked to ensure</p>

ELEMENT	PERFORMANCE CRITERIA
installation	compliance 5.2. Waste and scrap material is removed for disposal/recycling as required 5.3. Work area is cleaned and rubbish disposed of as appropriate 5.4. Tools, equipment and unused materials are cleaned and removed and stored appropriately 5.5. Workplace <i>records</i> are maintained

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand materials technology and information related to architectural engineered leadlight and stained glass
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to architectural engineered leadlight and stained glass
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in architectural engineered leadlight and stained glass
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, estimate work and material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of architectural engineered leadlight and stained glass
- seek learning opportunities
- use the workplace technology related to the installation of architectural engineered leadlight and stained glass components, including computers, measuring devices and recording systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for lead light and stained glass operations
- architectural lead light and stained glass construction terminology and techniques
- organisational and site standards, requirements, policies and procedures for preparation and installation of architectural lead light and stained glass
- types of glass and other materials used in the lead light and stained glass industry,

REQUIRED SKILLS AND KNOWLEDGE

- their characteristics, properties, uses and limitations
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Read and interpret a work/job specification
- Identify a range of structural lead lighting and stained glass detailing their uses and limitations
- Identify and explain the properties of structural lead light and stained glass
- Identify the likely impact of various environmental effects on architectural lead light and stained glass
- Prepare and install an architecturally engineered lead light/stain glass installation
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for structural lead light and stained glass
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to installing structural lead light and stained glass
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of

EVIDENCE GUIDE

tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to architects, engineers supervisors, suppliers, clients, colleagues and managers
Architecturally engineered lead	<ul style="list-style-type: none"> may include the on site installation of lead light and stained glass for structural and other

RANGE STATEMENT	
light and stained glass	<p>architecturally engineered applications, including but not limited to curtain walls, infill and structural balustrade, suspended and overhead glass</p> <ul style="list-style-type: none"> may include toughened glass assemblies; aluminium systems including planar assemblies, curtain wall systems, spider assemblies, panel wall systems (hung and stacked and watertight glazing techniques including the use of silicone
Tools and equipment	<ul style="list-style-type: none"> may include assembly benches, drop and up-cut saws, pneumatic, hydraulic and manual presses, lifting equipment, frame tooling, copy routers, end millers, crimpers, electric and pneumatic powered drills and screwdrivers, pop rivet guns, glue guns and general hand tools
Materials	<ul style="list-style-type: none"> may include but are not limited to steel, fasteners, plastics, sealants, tapes, vinyl's, gaskets, timber reveals and flashings may include lead lighting or stained glass panels, annealed glass, safety glass, patterned glass, tinted, heat reflective and insulated glass units
Fixing method	<ul style="list-style-type: none"> will be dependent on technical specification, type of glass and frame, security requirements, sealing methods and relevant Australian Standards
Preparation	<ul style="list-style-type: none"> may include cleaning, surface preparation (if required) and checking size against specification
Records	<ul style="list-style-type: none"> may include but not be limited to the product type, size, inspection, inspection outcomes, quality outcomes and storage locations

Unit Sector(s)

Unit sector	Lead Light and Stained Glass
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSL5001A Assess conservation requirements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to assess lead light and stained glass panels in order to identify and document the conservation requirements of those panels.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in leadlight and stained glass operations. The requirement to assess conservation requirements applies to an on site environment and involves application of skills and knowledge at an artisan level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify assessment requirements	1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to lead light and stained glass operations are verified and complied with 1.2. Purpose of the assessment is established confirmed and clarified with <i>appropriate personnel</i> 1.3. <i>Assessment outcomes</i> are identified and confirmed
2. Plan assessment processes	2.1. Location of the lead light and stained glass panels to be assessed is identified and observed 2.2. Assessment sequence is identified and a work plan is developed 2.3. <i>Tools and equipment</i> required for the assessment are identified 2.4. Approval of assessment plan is obtained as required by agreed procedures
3. Prepare for the assessment	3.1. Tools and equipment are assembled, positioned and checked prior to use to ensure that they are appropriate for the assessment, serviceable and in a safe condition 3.2. <i>Plans and other documents</i> are assembled and positioned to allow for confirmation of the panel structure and placement 3.3. Photographs are taken of the panel for documentation of condition and for later reference
4. Assess the panel	4.1. <i>Glass faults</i> are identified and noted 4.2. <i>Structural faults</i> or problems are identified and noted 4.3. <i>Environmental effects</i> are identified and noted 4.4. <i>Other problems</i> are identified and noted
5. Finalise and report on the assessment	5.1. Tools and equipment are removed cleaned and stored appropriately 5.2. Assessment area is cleaned and rubbish disposed of as appropriate 5.3. <i>Conservation requirements</i> resulting from the assessment are determined and confirmed with appropriate personnel 5.4. <i>Condition report</i> is prepared and provided as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand materials technology and information related to heritage leadlight and stained glass
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to heritage leadlight and stained glass
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in heritage leadlight and stained glass
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, estimate work and material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of heritage leadlight and stained glass
- seek learning opportunities
- use the workplace technology related to the selection of heritage leadlight and stained glass components conservation, including computers, measuring devices and recording systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for lead light and stained glass operations
- lead light and stained glass panels construction and repair terminology and techniques
- the principles of the Burra Charter, the Australia ICOMOS Charter for Places of Cultural Significance
- organisational and site standards, requirements, policies and procedures for the assessment of lead light and stained glass panels

REQUIRED SKILLS AND KNOWLEDGE

- types of glass and other materials, historically used in the lead light and stained glass industry, their characteristics, properties, uses and limitations
- environmental effects on lead light and stained glass panels
- heritage requirements specific to lead light and stained glass
- established communication channels and protocols
- problem identification and resolution
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Read and interpret a work/job specification
- Identify and interpret heritage legislation as it applies to lead light and stained glass panels
- Identify historical lead light and stained glass panel construction methods
- Identify framing, structural and construction techniques relevant to lead light and stained glass panels
- Identify the outcomes of various environmental effects on lead light and stained glass panels
- Identify faults and problems with lead light and stained glass panels, and their remedial methods
- Inspect a minimum of two separate and differing lead light and stained glass installations and assess the conservation requirements
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the assessment of conservation requirements of lead light and stained glass panels
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory and Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the assessment of lead light and stained glass panels to meet conservation requirements
 - specifications and work instructions

EVIDENCE GUIDE**Method of assessment**

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Appropriate personnel

- may include but not be limited to clients, architects, engineers construction supervisors, members of heritage committees, government agencies and where appropriate other specialist artisans, such as stonemasons.

RANGE STATEMENT	
Assessment outcomes	<ul style="list-style-type: none"> may include but is not limited to the requirement to conserve the lead light or stained glass panels, the cost of conservation, recommendations on future tasks
Tools and equipment	<ul style="list-style-type: none"> may include work benches, ladders and scaffolding, cameras, magnifying glasses, lights and general hand tools
Plans and other documents	<ul style="list-style-type: none"> may include original architectural plans, historical photographs, charcoal rubbings and sketches
Glass faults	<ul style="list-style-type: none"> may include but are not limited to cracking, crazing and missing sections, deterioration of glass paint, loose or flaking paint and corroding glass through water or chemical action
Structural faults	<ul style="list-style-type: none"> may include but are not limited to oxidation and rusting supports, panel frame deterioration, buckled and bowing panels, cracked comes and defective putty, faulty frames or frame settings, broken tie wires and support bars
Environmental effects	<ul style="list-style-type: none"> may include but is not limited to colour changes, surface etching, lead oxidation
Other problems	<ul style="list-style-type: none"> may include such aspects as building, wall and roof problems requiring specific remedial action, not directly related to the panel
Conservation requirements	<ul style="list-style-type: none"> Conservation as defined in the Australia ICOMOS Burra Charter as meaning all of the processes of looking after a place needed to retain cultural significance. It includes maintenance and may include preservation, restoration, reconstruction and adaptation dependent upon specific circumstances. It commonly involves a combination of more than one of these. It also requires that the stained glass conservator respects and understands the requirements of other specialist crafts and the role of other specialist artisans. Preservation is the process of maintaining the lead light and stained glass panel in its existing state and of retarding deterioration. Restoration means returning the lead light and

RANGE STATEMENT	
	<p>stained glass panel to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.</p> <ul style="list-style-type: none"> Reconstruction means returning the lead light and stained glass panel to a known earlier state and is distinguished by the introduction of new materials.
Condition report	<ul style="list-style-type: none"> would be in a format required by the client and may include such aspects as the extent of the problems, recommended solutions including methodologies, legislative requirements related to heritage lead light and stained glass and their affects on the recommendations and probable costings.

Unit Sector(s)

Unit sector	Lead Light and Stained Glass
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSL5002A Remove heritage lead light and stained glass

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to remove heritage lead light and stained glass panels in order to conserve those panels.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in leadlight and stained glass operations. The requirement to remove heritage lead light and stained glass panels applies to an on site environment and involves application of skills and knowledge at an artisan level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify removal requirements	1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to heritage lead light and stained glass operations are verified and complied with 1.2. Purpose of the removal is established confirmed and clarified with <i>appropriate personnel</i> 1.3. <i>Removal outcomes</i> are identified and confirmed
2. Plan removal processes	2.1. Location of the lead light and stained glass panel to be removed is identified and observed 2.2. Removal sequence is identified and a work plan is developed 2.3. <i>Tools and equipment</i> required for the removal are identified 2.4. Approval of removal plan is obtained as required by agreed procedures
3. Prepare for the removal	3.1. Tools and equipment are assembled positioned and checked prior to use to ensure that they are appropriate for the removal, serviceable and in a safe condition 3.2. <i>Supporting frames</i> and <i>storage materials</i> are prepared and positioned 3.3. <i>Plans and other documents</i> are assembled positioned to allow for confirmation of the panel structure and placement 3.4. Photographs are taken of the panel for later reference
4. Remove the panel	4.1. Supporting frames are secured to the panel 4.2. Panel structural supports are removed and stored 4.3. Panel is <i>removed</i> and placed in the storage area 4.4. Structural damage is identified and noted
5. Finalise and report on the removal	5.1. Removed panel is inspected, assessed and damage resulting from the removal is identified and noted 5.2. Tools and equipment are removed cleaned and stored appropriately 5.3. Removal area is cleaned and rubbish disposed of as appropriate 5.4. <i>Removal report</i> is prepared and provided as required

Required Skills and Knowledge

Required skills

- collect, organise and understand materials technology and information related to heritage leadlight and stained glass
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to heritage leadlight and stained glass
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in heritage leadlight and stained glass
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, estimate work and material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of heritage leadlight and stained glass
- seek learning opportunities
- use the workplace technology related to the removal of heritage leadlight and stained glass components, including computers, measuring devices and recording systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for lead light and stained glass operations
- lead light and stained glass panels construction and repair terminology and techniques
- the principles of the Burra Charter, the Australia ICOMOS Charter for Places of Cultural Significance
- organisational and site standards, requirements, policies and procedures for the removal of heritage lead light and stained glass panels
- types of glass and other materials, historically used in the lead light and stained glass industry, their characteristics, properties, uses and limitations
- heritage requirements specific to lead light and stained glass
- engineering aspect of supporting lead light and stained glass panels during the

Required skills

- | |
|---|
| <p>removal process</p> <ul style="list-style-type: none">• established communication channels and protocols• problem identification and resolution• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information• appropriate mathematical procedures for estimation and measurement |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Read and interpret a work/job specification
- Identify and interpret heritage legislation as it applies to lead light and stained glass panels
- Identify historical lead light and stained glass panel construction methods
- Identify framing, structural and construction techniques relevant to lead light and stained glass panels
- Identify removal methodologies
- Remove a heritage lead light/stain glass installation and store it to meet conservation requirements
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the removal of heritage lead light and stained glass panels
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the removal of heritage lead light and stained glass panels to meet conservation requirements
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of

EVIDENCE GUIDE

	<p>workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures.
- Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Appropriate personnel

- may include but not be limited to clients, architects, engineers construction supervisors, members of heritage committees, government agencies other specialist artisans, such as stonemasons

RANGE STATEMENT	
Removal outcomes	<ul style="list-style-type: none"> may include but is not limited to the requirement to dismantle, move and store the lead light or stained glass panels prior to any conservation work being undertaken
Tools and equipment	<ul style="list-style-type: none"> may include work benches, ladders and scaffolding, cameras, magnifying glasses, lights, cranes, forklifts and general hand tools
Supporting frames	<ul style="list-style-type: none"> may include wooden or metal frames that support the lead light and stained glass panels during the removal process
Storage materials	<ul style="list-style-type: none"> may include boxes, frames and other materials used to store and protect the lead light and stained glass panel following removal and while being transported
Plans and other documents	<ul style="list-style-type: none"> may include original architectural plans, historical photographs, charcoal rubbings and sketches
Removal	<ul style="list-style-type: none"> may include the requirement to dismantle the panel as it is being removed to stop it from falling apart.
Removal report	<ul style="list-style-type: none"> would be in a format required by the client or other bodies and may include such aspects as the extent of any damage to the surrounding building or fixture, any damage to the panel and any recommendations as to future requirements

Unit Sector(s)

Unit sector	Lead Light and Stained Glass
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSL5003A Conserve heritage lead light and stained glass

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to conserve heritage lead light and stained glass by preservation, restoration or reconstruction under the principles as determined by the Australia ICOMOS Burra Charter.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in leadlight and stained glass operations. The requirement to conserve heritage lead light and stained glass applies to a workshop and on site environment and involves application of skills and knowledge at an artisan level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify conservation requirements	1.1. Applicable OHS, legislative and organisational requirements relevant to lead light and stained glass operations are verified and complied with 1.2. Detailed inspections of the heritage lead light and stained glass are conducted to verify conservation requirements 1.3. Conservation requirements are identified confirmed and clarified with appropriate personnel
2. Plan conservation processes	2.1. Conservation sequence is identified and a work plan is developed 2.2. Tools and equipment required for the conservation are identified 2.3. Approval of conservation plan is obtained as required by agreed procedures
3. Prepare for the conservation process	3.1. Tools and equipment are positioned and checked prior to use to ensure that they are appropriate for the task, serviceable and in a safe condition 3.2. Plans and other documents are positioned to allow for confirmation of the panel structure 3.3. Outline charcoal rubbings are made to confirm design during the process 3.4. Photographs are taken of the panel for later reference
4. Conduct the conservation process	4.1. Panel is conserved and components are cleaned or disposed of. 4.2. Decisions on conservation methods are confirmed 4.3. Replacement materials are selected and prepared 4.4. Measurements and tests are conducted to confirm conservation plan 4.5. Panel is assembled and checked against the original data
5. Finalise and report on the assessment	5.1. Conserved lead light and stained glass panel is inspected for quality of work and problems are rectified 5.2. Tools and equipment are removed cleaned and stored appropriately 5.3. Conservation area is cleaned and rubbish disposed of as appropriate 5.4. Panel is packaged and stored prior to movement and installation.

ELEMENT	PERFORMANCE CRITERIA
	<i>5.5. Conservation report</i> is prepared and provided as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand materials technology and information related to heritage leadlight and stained glass
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to heritage leadlight and stained glass
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in heritage leadlight and stained glass
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, estimate work and material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of heritage leadlight and stained glass
- seek learning opportunities
- use the workplace technology related to the conservation of heritage leadlight and stained glass components, including computers, measuring devices and recording systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for lead light and stained glass operations
- the principles of the Burra Charter, the Australia ICOMOS Charter for Places of Cultural Significance
- lead light and stained glass panels construction and repair terminology and techniques
- organisational and site standards, requirements, policies and procedures for the assessment of lead light and stained glass panels

REQUIRED SKILLS AND KNOWLEDGE

- types of glass and other materials, historically used in the lead light and stained glass industry, their characteristics, properties, uses and limitations
- preservation, restoration or reconstruction techniques and when to use them
- heritage requirements specific to lead light and stained glass
- established communication channels and protocols
- problem identification and resolution
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Read and interpret a work/job specification
- Identify and interpret heritage legislation as it applies to lead light and stained glass panels
- Identify historical lead light and stained glass panel construction methods
- Assess and make decisions on conservation methods
- Identify faults and problems with lead light and stained glass panels, and their remedial methods
- Conserve heritage leadlight and stain glass panels in accordance with industry best practice
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the assessment of conservation requirements of lead light and stained glass panels
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the conservation of heritage lead light and stained glass panels
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of

EVIDENCE GUIDE

	<p>underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Conservation

- Conservation as defined in the Australia ICOMOS Burra Charter as meaning all of the processes of looking after a place needed to retain cultural significance. It includes maintenance and may include preservation,

RANGE STATEMENT	
	<p>restoration, reconstruction and adaptation dependent upon specific circumstances. It commonly involves a combination of more than one of these. It also requires that the stained glass conservator respects and understands the requirements of other specialist crafts and the role of other specialist artisans.</p> <ul style="list-style-type: none"> • Preservation is the process of maintaining the lead light and stained glass panel in its existing state and of retarding deterioration. • Restoration means returning the lead light and stained glass panel to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material. • Reconstruction means returning the lead light and stained glass panel to a known earlier state and is distinguished by the introduction of new materials.
Appropriate personnel	<ul style="list-style-type: none"> • may include but not be limited to clients, architects, engineers construction supervisors, members of heritage committees, government agencies other specialist artisans, such as stonemasons
Tools and equipment	<ul style="list-style-type: none"> • may include work benches, light tables, glass grinders, lead knives, lead vice, lathekins, farriers nails, glass cutters, grozing and small running pliers, soldering irons and bits, suede, cleaning and polishing brushers and pickers and general hand tools
Plans and other documents	<ul style="list-style-type: none"> • may include original architectural plans, historical documents and photographs, charcoal rubbings and sketches
Replacement materials	<ul style="list-style-type: none"> • may include but is not limited to glass, comes, solder and putty
Preparation	<ul style="list-style-type: none"> • may include but is not limited to painting, cutting, rolling and soldering
Measurements	<ul style="list-style-type: none"> • may include comparisons with the original plans or other available data
Tests	<ul style="list-style-type: none"> • may include structural soundness testing and colour matching

RANGE STATEMENT	
Assembly	<ul style="list-style-type: none"> • may include the requirement to assemble sections in order to facilitate later installation
Conservation report	<ul style="list-style-type: none"> • would be in a format required by the client and other bodies and may include such aspects as the extent of the conservation methods applied, problems encountered and methods of dealing with them. • may also include details required by government bodies

Unit Sector(s)

Unit sector	Lead Light and Stained Glass
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSL5004A Install heritage lead light and stained glass

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to install heritage lead light and stained glass panels following the conservation of the panels.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in leadlight and stained glass operations. The requirement to install heritage lead light and stained glass panels applies to an on site environment and involves application of skills and knowledge at an artisan level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and plan installation requirements	1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to lead light and stained glass operations are verified and complied with 1.2. Location of the lead light and stained glass panel to be installed is established confirmed and clarified with <i>appropriate personnel</i> 1.3. Installation sequence is identified and a work plan is developed 1.4. <i>Tools and equipment</i> required for the installation are identified 1.5. Approval of installation plan is obtained as required by agreed procedures
2. Prepare for the installation	2.1. Tools and equipment are positioned and checked prior to use to ensure that they are appropriate for the installation, serviceable and in a safe condition 2.2. <i>Inspection</i> of the opening where the panel is to be installed is conducted 2.3. Lead light and stained glass panel is inspected to ensure its integrity while being installed 2.4. <i>Plans and other documents</i> are positioned to allow for confirmation of the panel structure and placement 2.5. Photographs are taken of the panel for later reference
3. Install the panel	3.1. Panel is <i>installed</i> and placed in position 3.2. <i>Supporting frames</i> are removed from the panel 3.3. Panel structural supports are installed and checked 3.4. Structural damage is identified and noted
4. Finalise and report on the installation	4.1. Installed panel is inspected and damage resulting from the installation is identified and rectified 4.2. Tools and equipment are removed cleaned and stored appropriately 4.3. Removal area is cleaned and rubbish disposed of as appropriate 4.4. <i>Installation report</i> is prepared and provided as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand materials technology and information related to heritage leadlight and stained glass
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to heritage leadlight and stained glass
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in heritage leadlight and stained glass
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, estimate work and material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of heritage leadlight and stained glass
- seek learning opportunities
- use the workplace technology related to the installation of heritage leadlight and stained glass components, including computers, measuring devices and recording systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for lead light and stained glass operations
- lead light and stained glass panels construction and repair terminology and techniques
- the principles of the Burra Charter, the Australia ICOMOS Charter for Places of Cultural Significance
- organisational and site standards, requirements, policies and procedures for the installation of heritage lead light and stained glass panels

REQUIRED SKILLS AND KNOWLEDGE

- types of glass and other materials, historically used in the lead light and stained glass industry, their characteristics, properties, uses and limitations
- heritage requirements specific to lead light and stained glass
- engineering aspect of supporting lead light and stained glass panels during the installation process
- established communication channels and protocols
- problem identification and resolution
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Read and interpret a work/job specification
- Identify and interpret heritage legislation as it applies to lead light and stained glass panels
- Identify historical lead light and stained glass panel construction methods
- Identify framing, structural and construction techniques relevant to lead light and stained glass panels
- Identify installation methodologies
- Install heritage lead light and stained glass panels
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for the removal of heritage lead light and stained glass panels
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the installation of heritage lead light and stained glass panels following conservation work
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of

EVIDENCE GUIDE

	<p>underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Appropriate personnel

- may include but not be limited to clients, architects, engineers construction supervisors, members of heritage committees, government agencies other specialist artisans, such as stonemasons

RANGE STATEMENT	
Tools and equipment	<ul style="list-style-type: none"> may include work benches, ladders and scaffolding, cameras, magnifying glasses, lights, cranes, forklifts and general hand tools
Inspection	<ul style="list-style-type: none"> may include measuring to determine if the panel is the correct size and ensuring that the supporting infrastructure required for the panel is in place
Plans and other documents	<ul style="list-style-type: none"> may include original architectural plans, historical documents and photographs, contemporary photographs, charcoal rubbings and sketches
Installation	<ul style="list-style-type: none"> may include the requirement to dismantle the panel prior to installation to stop it from falling apart and assembling the panel in place
Supporting frames	<ul style="list-style-type: none"> may include wooden or metal frames that support the lead light and stained glass panels during its transportation and installation
Installation report	<ul style="list-style-type: none"> would be in a format required by the client and may include such aspects as the extent of any damage to the surrounding building or fixture, any damage to the panel and any recommendations as to future requirements

Unit Sector(s)

Unit sector	Lead Light and Stained Glass
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSL5005A Apply innovation in contemporary lead light and stained glass

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit addresses the knowledge and skills required to apply innovative techniques in the development of leadlight or stained glass works that may include the adaptation of traditional techniques such as lead light and stained glass or other techniques such as kiln-formed and laminated glass. The unit includes the need for research and analysis of ideas. It outlines the way glass works may be produced through experimentation and subsequent refinement of ideas and techniques.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in leadlight and stained glass operations. The requirement to apply innovation in contemporary lead light and stained glass applies to a workshop and onsite environment and involves application of skills and knowledge at a tradesperson level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify the potential or need for innovation	1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to lead light and stained glass operations are verified and complied with 1.2. Analyse design or production elements to determine areas where <i>research</i> and experimentation may be appropriate 1.3. Proactively assess the potential for the use of <i>new techniques</i> and <i>media</i> to maximise the effectiveness of lead light and stained glass
2. Conduct research	2.1. Undertake relevant research to identify the historical, cultural and other factors that might influence techniques or media 2.2. Research, adapt and use relevant ideas and approaches from other practitioners with consideration of <i>intellectual property, moral rights and copyright requirements</i> 2.3. Identify appropriate specialists who may be able to contribute to the overall realisation of innovative lead light and stained glass 2.4. Maintain references in an accessible form to allow for use by other colleagues as required 2.5. Use research material to adapt styles for integration into lead light and stained glass production
3. Experiment with techniques and media	3.1. Conduct trials to establish the best ways in which the desired scenic art effect can be achieved 3.2. Assess results of <i>experimentation</i> , balancing the need for creative effectiveness and cost practicality 3.3. Select, adapt or introduce new materials, tools, equipment or technology for the achievement of different effects 3.4. Liaise with colleagues to provide information on the results of experimentation and to make appropriate decisions on new techniques and media 3.5. Set-up or coordinate specific resource requirements which arise from the use of different techniques in accordance with workplace requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand materials technology and information related to innovative and contemporary leadlight and stained glass
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain quality records related to innovative and contemporary leadlight and stained glass
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- identify, anticipate and respond to faults in innovative and contemporary leadlight and stained glass
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and volume, estimate work and material requirements
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of innovative and contemporary leadlight and stained glass
- seek learning opportunities
- use the workplace technology related to innovative and contemporary leadlight and stained glass components, including computers, measuring devices and recording systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for lead light and stained glass operations
- contemporary lead light and stained glass construction terminology and techniques
- organisational and site standards, requirements, policies and procedures for preparation and installation of architectural lead light and stained glass
- types of glass and other materials used in the lead light and stained glass industry,

REQUIRED SKILLS AND KNOWLEDGE

- their characteristics, properties, uses and limitations
- appropriate innovative and experimental lead light and stained glass production techniques in 2-dimensional (2D) and 3-dimensional (3D)
- colour theory, line, dimension, chiaroscuro, depth and their application to lead light and stained glass
- painting and firing techniques
- the use and properties of a range of paints and media
- testing finished and unfinished materials,
- research skills and sources of information to inform research and experimentation on lead light and stained glass
- costs and costing processes for lead light and stained glass elements
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Read and interpret a design specification
- Identify and explain the properties of lead light and stained glass
- Conduct research into new and innovative applications of lead light and stained glass
- Apply in depth knowledge of a wide range of techniques and media that may be used and adapted for lead light and stained glass
- Create panels using differing innovative lead light and stained glass effects
- Identify the likely impact of various environmental effects on lead light and stained glass
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for lead light and stained glass
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context
- Assessment is to comply with relevant regulatory and Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to the production of innovative lead light and stained glass
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of

EVIDENCE GUIDE

	<p>workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Research

- may include but is not limited to seeking out information in books, journals, newspapers, visiting exhibitions, museums, conducting material and technical experiments and tests, approaching individuals with relevant

RANGE STATEMENT	
	expertise, reviewing approaches of other practitioners
New techniques	<ul style="list-style-type: none"> may include but is not limited to screen printing, using computer design software, use of non traditional materials and media, fusing different glass, sandwiching materials and applying different painting and firing techniques.
New media	<ul style="list-style-type: none"> may include but is not limited to fabrics, silks, metals, glass, canvas, gauze, wool, velour, paper, wood, film and computer-generated imagery
Intellectual property, moral rights and copyright requirements	<ul style="list-style-type: none"> may include the protocols for the adaptation of work by others, extent to which the work may be used, procedures for seeking permission to use the work of others, including systems for the administration of copyright
Experimentation	<ul style="list-style-type: none"> may include but is not limited to colour mixes, textures, materials, painting styles

Unit Sector(s)

Unit sector	Lead Light and Stained Glass
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFSS2001A Use security screens and grills hand and power tools

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required for the use of security screens and grills hand and power tools and includes identification, selection, preparation, use and storage of hand and power tools. The unit includes operator maintenance.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the manufacture and installation of security screens and grills. This unit applies to a factory or an on-site installation environment and involves application of skills and knowledge at a production worker and trades skills level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hand and power tools	<p>1.1.Types of <i>hand and power tools</i> and their functions are identified</p> <p>1.2.Sources of <i>power supply</i> are recognised</p> <p>1.3.<i>OHS, legislative and organisational requirements</i> for using hand and power tools are recognised and adhered to.</p>
2. Select hand tools	<p>2.1.Hand tools are selected consistent with the needs of the job</p> <p>2.2.Appropriate personal protection equipment is selected, correctly fitted and used</p> <p>2.3.Selected tools are checked for serviceability and safety and any faults are rectified or reported</p> <p>2.4.Equipment is selected to hold or support <i>material</i> for hand tool application where applicable</p>
3. Use hand tools	<p>3.1.Material is located and held in position for hand tool application</p> <p>3.2.Hand tools are safely and effectively used in according to their intended use</p> <p>3.3.Hand tools are safely located when not in immediate use</p>
4. Select power tools	<p>4.1.Appropriate personal protective equipment is selected, correctly fitted and used</p> <p>4.2.Power tools are selected consistent with the needs of the job in accordance with conventional work practices</p> <p>4.3.Power tools are visually checked for serviceability/safety in accordance OHS requirements and any faults are rectified or reported</p> <p>4.4.Equipment is selected to hold or support materials for power tool application where applicable</p>
5. Use power tools	<p>5.1.Material is located and held in position for power tool application where applicable</p> <p>5.2.Power tools are safely and effectively used in application processes</p> <p>5.3.Power tools are safely located when not in use</p>
6. Clean up work area and maintain tools	<p>6.1.Faulty and/or defective equipment/tools are tagged and reported in accordance with workplace procedures</p> <p>6.2.All tools are cleaned, maintained and stored in</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>accordance with workplace procedures</p> <p>6.3. Equipment is cleaned, maintained and stored in accordance with workplace procedures</p> <p>6.4. Work area is cleaned and <i>waste</i> removed in accordance with workplace procedures</p> <p>6.5. <i>Records and reports</i> are completed to workplace requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities, including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- complying with legislation, regulations, standards, codes of practice and established safe practices and procedures for manufacturing/installing security screens and grills
- clarify and confirm work instructions
- plan own work within the given task parameters
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of security screens and grills, manufacturing and installation techniques
- seek learning opportunities
- use the workplace technology related to the selection, preparation and operator maintenance of security screens and grills hand and power tools including calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for manufacturing or installation tasks
- function, purpose and operator maintenance requirements of hand and/or power tools used in the workplace
- organisational and site standards, requirements, policies and procedures for

REQUIRED SKILLS AND KNOWLEDGE

- manufacturing/installing security screens and grills
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of steel and/or aluminium, steel and/or aluminium products and defects
- industry standard cross-sections and lengths
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Apply safe handling practices for equipment, products and materials
- Adopt and carry out correct procedures prior to and during use of hand and power tools prescribed in the Range Statement
- Comply with legislation, regulations, standards, codes of practice and establish safe practices and procedures for manufacturing/installation operations
- Follow work instructions, operating procedures and inspection practices to:
 - prevent damage to surrounds, goods, tools, equipment or products
 - maintain required production output and product quality
 - minimise the risk of injury to self or others
 - apply hand and power tools correctly and safely
 - complete operator maintenance on hand and power tools
 - store tools correctly
 - work effectively with others
 - modify activities to cater for variations in workplace contexts an environment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to manufacturing or fitting security screens and grills
 - specifications and work instructions
 - the full range of routinely used security screens

EVIDENCE GUIDE	
	and grills power and hand tools
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Hand and power tools	<ul style="list-style-type: none"> include, but are not limited to knives, sheers, assorted air tools, assorted electric tools, measuring devices, straight edge, square, assorted hammers, rollers, compressor, drop saw, circular saw, combination saw, rivet gun, metal press and dies
Power supply	<ul style="list-style-type: none"> may include electricity or compressed air for the operation of power tools.
OHS requirements	<ul style="list-style-type: none"> are to be in accordance with Commonwealth, State or Territory legislation and regulations, local government by-laws, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling, including lifting and carrying.
Legislative requirements	<ul style="list-style-type: none"> are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.
Organisational requirements	<ul style="list-style-type: none"> may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and

RANGE STATEMENT	
	practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)
Material	<ul style="list-style-type: none"> may include but not be limited to steel or aluminium material in extruded or sheet form; synthetic, aluminium or steel screen material.
Waste	<ul style="list-style-type: none"> may include but not be limited to off-cuts and shavings
Records and reports	<ul style="list-style-type: none"> may include but not be limited to the machining method, product type, size, inspection, grading and labelling outcomes, storage locations, quality outcomes, hazards, incidents or equipment malfunctions
Communication	<ul style="list-style-type: none"> may include verbal and non-verbal language, constructive feedback, active listening, questioning to clarify and confirm understanding, use of positive, confident and co-operative language, use of language and concepts appropriate to individual social and cultural differences, control of tone of voice and body language

Unit Sector(s)

Unit sector	Security Screens and Grills (SS)
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

Co-requisite units		

LMFSS2002A Rectify faults in product

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the rectification of faults in fabrication and assembly work.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. Rectify faults in product applies to a factory/onsite environment and involves application of skills and knowledge at a production worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to rectifying <i>faults</i> in the manufacturing and installation of security screens and grills are verified and complied with</p> <p>1.2. Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement</p> <p>1.3. Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use</p> <p>1.4. Workplace environment considerations are identified and measures to reduce noise, dust and obstacles are applied</p>
2. Assess the fault to identify rectification issues	<p>2.1. The fault is identified and inspected to confirm the extent and nature of the fault</p> <p>2.2. Assess the fault to determine whether it is a defect in workmanship, process or material</p> <p>2.3. Provide a verbal and/or written report on the nature of the defect and probable cause</p> <p>2.4. Faults found are assessed for remedial solutions</p> <p>2.5. Solution to repair the fault is selected and planned</p>
3. Rectify faults	<p>3.1. Damage or defective area is prepared for repair</p> <p>3.2. Specialist instruments and repair tools are applied to rectify the fault</p> <p>3.3. Damage or defective area is finished to specification</p> <p>3.4. Documentation is completed outlining the nature of the fault, work conducted and outcome, in accordance with enterprise requirements</p> <p>3.5. Rectified parts are processed for inspection and returned to the production/installation sequence</p>
4. Clean up	<p>4.1. Work area is cleared and materials disposed of, reused or recycled in accordance with enterprise requirements</p> <p>4.2. Tools and equipment are cleaned, checked, maintained and stored in accordance with enterprise requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use and avoid re-work and wastage
- identifying problems and equipment faults and demonstrate appropriate response procedures
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- complying with legislation, regulations, standards, codes of practice and established safe practices and procedures for manufacturing/installing security screens and grills
- clarify and confirm work instructions
- plan own work within the given task parameters
- apply systematic and effective time management
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of security screens and grills manufacturing and installation techniques
- seek learning opportunities
- use the workplace technology related to the selection, preparation and operator maintenance of security screens and grills hand and power tools, including calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for manufacturing and installing security

REQUIRED SKILLS AND KNOWLEDGE

screens and grills

- organisational and site standards, requirements, policies and procedures for manufacturing and installing security screens and grills
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of steel and aluminium products and defects
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Location, interpretation and application of relevant information, standards and specifications • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for fault rectification • Communicate effectively and work safely with others in the work area • Compliance with enterprise policies and procedures including quality requirements • Safe and effective operational use of tools and equipment • Inspection, assessment and rectification on a minimum of five separate and different faults to specifications and enterprise inspections requirements
<p>Context of, and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The candidate should be able to demonstrate the identification and rectification of three disparate faults • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to rectifying faults in the manufacturing and/or installing security screens and grills • specifications and work instructions
<p>Method of assessment</p>	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and</p>

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, First Aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Faults

- are defects in workmanship or materials that effect the look or functional quality of the finished product.

Unit Sector(s)

Unit sector	Security Screens and Grills (SS)
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSS2003A Prepare product for Australian Standards testing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	Prepare security screens and grills for compliance testing against the Australian Standards. This does not cover the testing of the sample.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. Prepare product for Standards testing applies to a factory/onsite environment and involves application of skills and knowledge at a production worker/tradesperson/supervisory level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify sample for testing	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to the certification process are verified and complied with</p> <p>1.2. A <i>sample</i> is identified in accordance with Standard requirements</p>
2. Prepare documentation	<p>2.1. Documentation is prepared in accordance with Australian Standards and organisational requirements</p> <p>2.2. Sample is packaged for transportation to a recognised testing facility in accordance with Australian Standard requirements</p>
3. Post test action	<p>3.1. Reports of tests are <i>actioned</i> in accordance with Australian Standard and organisational requirements</p> <p>3.2. Where samples fail a test element, reports are presented to management for remedial action</p> <p>3.3. Where samples pass, management ensure that product <i>Certification of Compliance</i> is prepared and an appropriate notice affixed to the product in accordance with Australian Standards and organisational requirements</p> <p>3.4. Records of all processes and actions are included in the organisation's quality system</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use and avoid re-work and wastage
- identifying problems and equipment faults and demonstrate appropriate response procedures
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- complying with legislation, regulations, standards, codes of practice and established safe practices and procedures for manufacturing/installing security screens and grills
- clarify and confirm work instructions
- plan own work within the given task parameters
- apply systematic and effective time management
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of security screens and grills manufacturing and installation techniques
- seek learning opportunities
- use the workplace technology related to the selection, preparation and operator maintenance of security screens and grills hand and power tools including calculators and measuring devices

Required knowledge

- organisational and site standards, requirements, policies and procedures for certification of products in accordance with the Australian Standards

REQUIRED SKILLS AND KNOWLEDGE

- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance
- storage systems and labelling
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for seeking the certification of compliance of security screens and grills with Australian Standards
- Communicate effectively and work safely with others in the work area

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to identifying a sample
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

EVIDENCE GUIDE	
	Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Sample

- is the product in the form of a production model security screen or grill with ancillary fittings such as hinges and locks where applicable

RANGE STATEMENT	
Actioned	<ul style="list-style-type: none"> refers to bringing the report findings to the attention of the appropriate organisational appointees responsible for resolving or processing the report's findings
Certification of Compliance	<ul style="list-style-type: none"> refers to the marking/labelling able to be affixed to product once it has passed the appropriate test at an Australian Standards recognised testing facility.

Unit Sector(s)

Unit sector	Security Screens and Grills
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSS2004A Undertake surface preparation

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This competency covers the preparation of surfaces for protective coatings, under-coatings and finishes using solvents, by hand or machine.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. Prepare product for Standards testing applies to a factory environment and involves application of skills and knowledge at a production worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Check work requirements	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to <i>surface preparation</i> are verified and complied with</p> <p>1.2. <i>Instructions</i>, plans and/or work instructions are read and interpreted to identify processes and materials to complete work tasks</p> <p>1.3. <i>Tools, equipment</i> and <i>materials</i> are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition</p> <p>1.4. Where required, appropriate solvent and solvent application is selected to meet job specification</p>
2. Setup equipment	<p>2.1. Work site is prepared in accordance with surface cleaning activity</p> <p>2.2. Appropriate equipment and any required consumables assembled, set up and prepared in accordance with manufacturers' specifications and organisational procedures</p> <p>2.3. Recognise <i>hazards</i> and adopt steps required to ensure safety</p> <p>2.4. Identify and exclude sources of contamination</p>
3. Prepare surfaces using solvents as required	<p>3.1. Prepare surfaces for procedures</p> <p>3.2. Safe working environment for <i>solvent</i> use is established according to regulatory requirements and organisational procedures</p> <p>3.3. Solvents are applied</p> <p>3.4. The treated surface is neutralised and made safe to handle</p> <p>3.5. The area is made safe in accordance with organisational procedures</p>
4. Prepare surfaces using mechanical means	<p>4.1. Safe working environment for mechanical surface preparation is established according to regulatory requirements and organisational procedures</p> <p>4.2. Prepare surfaces to procedures using mechanical means</p> <p>4.3. Make adjustments as required to meet specifications</p> <p>4.4. Rectify surface preparation faults as required</p> <p>4.5. Equipment used is cleaned and checked for damage and operational faults in accordance with organisational procedures</p>

ELEMENT	PERFORMANCE CRITERIA
5. Ensure surfaces adequately prepared	5.1. Surface preparation is assessed for cleanliness and conformance with specification 5.2. Identify and take action to remedy faults in accordance with procedures 5.3. Report problems to designated person 5.4. Complete records and documentation in accordance with organisational procedures 5.5. Work area is restored and waste disposed of in accordance with organisational procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to avoid re-work and wastage
- identifying problems and equipment faults and demonstrate appropriate response procedures
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- complying with legislation, regulations, standards, codes of practice and established safe practices and procedures for manufacturing/installing security screens and grills
- clarify and confirm work instructions
- plan own work within the given task parameters
- apply systematic and effective time management
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of tools and materials
- maintain current knowledge of security screens and grills manufacturing and installation techniques
- seek learning opportunities
- use the workplace technology related to the use of solvents and hand and mechanical tools including calculators and measuring devices

Required knowledge

- organisational and site standards, requirements, policies and procedures for the preparation of surfaces for coating
- environmental protection requirements relating to the disposal of waste material

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• established communication channels and protocols• problem identification and resolution• contaminants• treatment for different substrates• types of tools and equipment and procedures for their safe use, operation and maintenance• safe handling of hazardous materials• storage systems and labelling• procedures for the recording, reporting and maintenance of workplace records and information |
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Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for undertaking surface preparation
- Consistent safe performance and standards are demonstrated
- Material properties and qualities are understood and provided for
- Appropriate action is taken to resolve faults or report faults to appropriate personnel
- A minimum of two surfaces are prepared for powder coating or other finish without the need for further preparation
- Communicate effectively and work safely with others in the work area
- Work area housekeeping activities, including cleanup, are performed effectively and in accordance with organisational procedures

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - materials and equipment relevant to identifying a sample
 - specifications and work instructions

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning

EVIDENCE GUIDE

knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Surface preparation

- refers to the preparation of product material for finish coating, either powder coating or other finish paint type surface, through solvent or mechanical means. Mechanical means may be steel brush, file, etc.

RANGE STATEMENT	
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Production planning figures • Workplace instructions, including job sheets, plans, specifications, drawings and designs • Workplace procedures relating to reporting and communications • Manufacturer instructions for the use of equipment and materials
Tools and equipment	<ul style="list-style-type: none"> • are to include files, hand rasps, hand finishing tools, power tools, jigs and power sanders
Materials	<ul style="list-style-type: none"> • may include metal, aluminium or composite materials
Hazards	<ul style="list-style-type: none"> • may include acids, hydrocarbons and other solvents as both liquid or vapour, moving equipment and machinery and manual handling hazards.
Solvents	<ul style="list-style-type: none"> • may include a range of cleaning materials including acids, hydrocarbons etc. The application of solvents may be by brush, spraying, wiping, or dipping in a solvent bath

Unit Sector(s)

Unit sector	Security Screens and Grills
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

Co-requisite units		

LMFSS3001A Install security screens and grills

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit specifies the outcomes required for the installation of security screens and grills.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in the installation of security screens and grills. This unit applies to an on-site environment and involves application of skills and knowledge at both the installation worker and the trade skills level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	1.1. Applicable OHS, legislative and organisational requirements relevant to security screens and grill installation are verified and complied with 1.2. Work order is reviewed, confirmed and clarified with appropriate personnel 1.3. Security screens and grills are identified and checked against the work order and located ready for installation 1.4. Tools and equipment are selected appropriate to work requirements and checked for operational effectiveness in accordance with manufacturers recommendations
2. Prepare position for security screen or grill	2.1. Existing screens and grills are removed where necessary to make way for the security screens and grills 2.2. The jamb stiles are assessed for the installation of the security screen/grills frame and adjustments made as necessary 2.3. The frame is positioned and secured in place so that the head/sill is level and stiles plumb. 2.4. Additional preparation for the locking mechanism is made where necessary
3. Install security screens and grills	3.1. Security screen/grill is inserted in the frame and tested for operation of open and shut 3.2. Locking mechanism is installed and tested 3.3. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures 3.4. Installation completion and equipment faults are recorded and reported to the appropriate personnel
4. Clean work areas	4.1. Waste and scrap is removed following workplace procedures 4.2. Tools used are cleaned; inspected for serviceable condition and stored appropriately in accordance with workplace procedures 4.3. Records and reports are completed to workplace requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- collect, organise and understand detailed technical information related to the materials and the products used in and related to installation of security screens and grills
- communicate ideas and information to enable confirmation of work requirements and specifications, co-ordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain records related to product and materials quality
- work with others and in a team by recognising dependencies and using co-operative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use and to avoid re-work and wastage
- use checking and inspection techniques to ensure security screens and grills comply with specifications and that instances of non-compliance are remedied
- identify, anticipate and respond to the problems related to timber and material properties
- identify and analyse faults in security screens and grills
- select and apply the most appropriate maintenance and repair techniques
- identify, anticipate design issues associated with functionality and building codes in relation to the security screen or grill to be used
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage during the production cycle
- use mathematical ideas and techniques to correctly complete measurements, calculate area, and estimate other material requirements
- complying with legislation, regulations, standards, codes of practice and established safe practices and procedures for machining material
- clarify and confirm work instructions
- plan work within given task parameters
- apply systematic and effective time management
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of security screens and grills installation tools and

REQUIRED SKILLS AND KNOWLEDGE

materials

- maintain current knowledge of security screens and grills installation processes and techniques
- seek learning opportunities
- use the workplace technology related to the selection, preparation and use of security screens and grills products and materials including hand and power tools, calculators, measuring devices and technical support systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for the installation of security screens and grills
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Read and interpret a work order/job specification</p> <ul style="list-style-type: none"> • Effectively install security screens and grills • Effectively conduct operator maintenance on tools and equipment and report faults • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures • Communicate effectively and work safely with others in the work area
<p>Context of, and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to the installation of security screens and grills • specifications and work instructions
<p>Method of assessment</p>	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p> <p>Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application</p> <p>Assessment may be applied under project related conditions (real or simulated) and require evidence of</p>

EVIDENCE GUIDE

	<p>process</p> <p>Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances</p> <p>Assessment may be in conjunction with assessment of other units of competency</p>
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, State and local government building codes, fire codes, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Work order

- is to include instructions for the removal of existing screens and grills and the installation of security screens and grills including caveats on operational requirements where applicable.

RANGE STATEMENT	
	The Work Order is sometimes also known as a Job Sheet.
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to supervisors, suppliers, clients, colleagues and managers
Tools and equipment	<ul style="list-style-type: none"> may include but not be limited to hand and power tools used in installation of security screens and grills and scaffolding, ladders, safety barricades and so on.
Records and reports	<ul style="list-style-type: none"> may include but not be limited to the operating limitations or requirements, lock type and location of combination/keys (if applicable), inspection outcomes where undertaken, quality outcomes, hazards, incidents or equipment malfunctions
Waste	<ul style="list-style-type: none"> may include but not be limited to off-cuts, shavings and sawdust

Unit Sector(s)

Unit sector	Security Screens and Grills
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFSS3002A Apply patterns and designs to security screens and grills

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit involves the skill and knowledge required to produce repeatable designs to the security screens and grills through the use of patterns. It does not involve the formulation of the design though may require design adjustment to fit the particular job task.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The application of patterns and designs to security screens and grills applies to a factory environment and involves application of skills and knowledge at a production worker/tradesperson level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify work requirements	1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to machine material are verified and complied with 1.2. <i>Work order</i> is reviewed, confirmed and clarified with <i>appropriate personnel</i> 1.3. <i>Design</i> is interpreted to determine work specifications 1.4. Instructions for sequencing of work, particular measurements or adjustments are interpreted 1.5. Work sequence is planned, including quality checkpoints
2. Prepare for work	2.1. Suitable work area is selected for the tasks 2.2. Materials are selected to match customer requirements, suitability for purpose and the work instructions 2.3. Potential hazards are identified from observation of the tools, equipment, materials and workplace reference material 2.4. Tools, equipment and materials are selected and checked prior to use to ensure that they are appropriate for the work, serviceable and in a safe condition
3. Complete construction	3.1. <i>Patterns</i> (where not already held of the design) are constructed following work instructions 3.2. Patterns are adjusted where specific variation to the work design is required 3.3. Work is checked against patterns and work sheets at the identified checkpoints 3.4. Non-conformity with the required quality standards is rectified
4. Finalise operations	4.1. Completed work is checked against required quality standard 4.2. Documentation or reporting is completed following workplace procedures 4.3. Work area is cleaned, tools and equipment are returned to storage 4.4. Unused materials are returned to storage and waste and scrap is dealt with following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- collect, organise and understand detailed technical information related to the materials and the products used in and related to installation of security screens and grills
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- maintain records related to product and materials quality
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use and to avoid re-work and wastage
- use checking and inspection techniques to ensure security screens and grills comply with specifications and that instances of non-compliance are remedied
- identify, anticipate and respond to the problems related to timber and material properties
- identify and analyse faults in security screens and grills
- select and apply the most appropriate maintenance and repair techniques
- identify, anticipate design issues associated with functionality and building codes in relation to the security screen or grill to be used
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage during the production cycle
- use mathematical ideas and techniques to correctly complete measurements, calculate area, and estimate other material requirements
- complying with legislation, regulations, standards, codes of practice and established safe practices and procedures for machining material
- clarify and confirm work instructions
- plan work within given task parameters
- apply systematic and effective time management
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of security screens and grills production tools and

REQUIRED SKILLS AND KNOWLEDGE

materials

- maintain current knowledge of security screens and grills design processes and techniques
- seek learning opportunities
- use the workplace technology related to the selection, preparation and use of security screens and grills products and materials including hand and power tools, calculators, measuring devices and technical support systems

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice relevant to the full range of processes for machining material
- organisational and site standards, requirements, policies and procedures for welding material
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- types of tools and equipment and procedures for their safe use, operation and maintenance
- procedures for the recording, reporting and maintenance of workplace records and information
- appropriate mathematical procedures for estimation and measurement
- the process for the interpretation of patterns
- workflow in relation to screen design makeup

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Design is replicated effectively across all product
- Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for machining material using
- Communicate effectively and work safely with others in the work area
- Identify materials used and any handling requirements for those materials
- Apply safe handling practices for equipment, products and materials
- Interpret work order and patterns and locate and apply relevant information
- Select and use tools and equipment appropriate to the task follow work instructions, operating and inspection practices to:
 - prevent damage to goods, equipment or products
 - maintain required output and product quality
 - work effectively with others
 - modify activities to cater for variations in workplace contexts and environment
 - report process or material faults, damaged products or equipment

Context of, and specific resources for assessment

- The application of competency is to be assessed in the workplace or realistically simulated workplace
- Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints
- Assessment is to comply with relevant regulatory or Australian Standards requirements
- The following resources should be made available:
 - workplace location or simulated workplace
 - specifications and work instructions
 - appropriate tools, materials and equipment

Method of assessment

Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package
Assessment methods must confirm consistency and

EVIDENCE GUIDE

accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Work order

- is to include instructions for the design, materials and security rating from the work site and may include pattern, type, size, length, angle and quantity

RANGE STATEMENT	
Appropriate personnel	<ul style="list-style-type: none"> may include but not be limited to supervisors, suppliers, clients, colleagues and managers
Design	<ul style="list-style-type: none"> is the outline, sketch or plan to be constructed and may include specifications of security rating, shape, length, width, height, material composition of the project
Patterns	<ul style="list-style-type: none"> is a model or form that can be used to guide the shape of the screen

Unit Sector(s)

Unit sector	Security Screens and Grills
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFSS3003A Resolve quality and compliance issues

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the resolving of routine quality and compliance issues in the fabrication, assembly and installation of security screens and grills.
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Application of the Unit

Application of the unit	This unit supports the attainment of skills and knowledge required for competent workplace performance in furnishing operations of all sizes. The resolution of quality and compliance issues applies to a factory/onsite environment and involves application of skills and knowledge at a trade and, in some cases, production worker level. These skills and knowledge are to be used within the scope of the individual's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare	<p>1.1. Applicable <i>OHS, legislative</i> and <i>organisational</i> requirements relevant to <i>quality or compliance issues</i> in the manufacturing and installation of security screens and grills are verified and complied with</p> <p>1.2. <i>Instructions</i> and/or plans are read and interpreted to identify the process required to complete work tasks</p> <p>1.3. Tools and equipment selected to carry out tasks are consistent with the requirements of the job, checked for serviceability and any faults are rectified or reported prior to commencement</p> <p>1.4. Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use</p> <p>1.5. Workplace environment considerations are identified and measures to reduce noise, dust and obstacles are applied</p>
2. Identify quality and/or compliance issues	<p>2.1. Define and determine the issues to be investigated</p> <p>2.2. Assess the issues to determine whether it is a defect in workmanship, process or material</p> <p>2.3. Objectively identify and document current conditions of hardware, software, user or procedure</p> <p>2.4. Provide a verbal and/or written report in accordance with organisation policy on the nature of the problem and probable cause</p>
3. Recommend solutions to resolve issues identified	<p>3.1. Identify hardware, software, user or procedural quality and/or compliance area(s) to appropriate person in the organisation</p> <p>3.2. Identify and rank potential solutions to resolve the issue(s)</p> <p>3.3. Determine in accordance with organisational policy whether the issue can be resolved at current or higher level</p> <p>3.4. Select the solution to fix the issue or refer to appropriate person for decision</p> <p>3.5. The implementation of the recommended solution is planned together with an evaluations strategy to assess the solutions' effectiveness</p> <p>3.6. Verbal and/or written report is submitted in accordance with organisational requirements recommending action to be taken and/or advising</p>

ELEMENT	PERFORMANCE CRITERIA
	action taken and outcome
4. Clean up	4.1. Work area is cleared and materials disposed of, reused or recycled in accordance with organisational requirements 4.2. Tools and equipment are cleaned, checked, maintained and stored in accordance with organisational requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise work flow and productivity
- use pre-checking and inspection techniques to ensure the tools are serviceable and ready to use and avoid re-work and wastage
- identifying quality problems and equipment faults and demonstrate appropriate response procedures
- recognise and respond to circumstances outside instructions or personal competence
- plan and organise activities including the preparation and layout of own worksite and the obtaining and use of tools and materials to avoid any backtracking, work flow interruptions or wastage
- initiate new ideas or work methodologies
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate other material requirements
- complying with legislation, regulations, standards, codes of practice and established safe practices and procedures for manufacturing/installing security screens and grills
- clarify and confirm work instructions
- plan own work within the given task parameters
- apply systematic and effective time management
- accept responsibility for given tasks
- set, monitor and satisfy personal work goals
- satisfy the competency requirements for the job
- maintain current knowledge of problem solving tools and materials
- maintain current knowledge of security screens and grills manufacturing and installation techniques
- seek learning opportunities
- use the workplace technology related to the selection, fabrication, preparation and operator maintenance of security screens and grills hand and power tools including calculators and measuring devices

Required knowledge

- State or Territory OHS legislation, regulations, standards and codes of practice

REQUIRED SKILLS AND KNOWLEDGE

relevant to the full range of processes for manufacturing and installing security screens and grills

- organisational and site standards, requirements, policies and procedures for manufacturing and installing security screens and grills
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution
- current industry practices
- types of tools and equipment and procedures for their safe use, operation and maintenance
- characteristics of steel and aluminium products and defects
- procedures for the recording, reporting and maintenance of workplace records and information

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<ul style="list-style-type: none"> • Location, interpretation and application of relevant information, standards and specifications • Comply with legislation, regulations, standards, codes of practice and established safe practices and procedures for fault rectification • Communicate effectively and work safely with others in the work area • Compliance with enterprise policies and procedures including quality requirements • Inspect and assess of a minimum of three separate and different quality and two compliance issues and have recommendations accepted • Safe and effective operational use of tools and equipment
<p>Context of, and specific resources for assessment</p>	<ul style="list-style-type: none"> • The application of competency is to be assessed in the workplace or realistically simulated workplace • Assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints • Assessment of essential underpinning knowledge, other than confirmatory questions, will usually be conducted in an off-site context • Assessment is to comply with relevant regulatory or Australian Standards requirements • The following resources should be made available: <ul style="list-style-type: none"> • workplace location or simulated workplace • materials and equipment relevant to rectifying quality and compliance issues in the manufacturing and/or installation of security screens and grills • specifications, standards and work instructions
<p>Method of assessment</p>	<p>Assessment must satisfy the endorsed assessment guidelines of the Furnishing Industry Training Package</p> <p>Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge</p>

EVIDENCE GUIDE

Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application

Assessment may be applied under project related conditions (real or simulated) and require evidence of process

Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances

Assessment may be in conjunction with assessment of other units of competency

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS requirements

- are to be in accordance with Commonwealth, State or Territory legislation and regulations, organisational safety policies and procedures. Requirements may include but not be limited to the use of personal protective equipment and clothing, fire fighting equipment, first aid equipment, hazard and risk control and elimination of hazardous materials and substances, manual handling including lifting and carrying.

Legislative requirements

- are to be in accordance with applicable legislation from all levels of government that affect organisational operation. Requirements may include but not be limited to award and enterprise agreements, industrial relations, Australian Standards, confidentiality and privacy, OHS, the environment, equal opportunity, anti-discrimination, relevant industry codes of practice, duty of care and heritage.

Organisational requirements

- may include but not be limited to legal, organisational and site guidelines, policies and procedures relating to own role and responsibility, quality assurance, procedural manuals, quality and continuous improvement processes and standards, OHS, emergency and evacuation, ethical standards, recording and reporting, access and equity principles and practices, equipment use, maintenance and storage, environmental management (waste disposal, recycling and re-use guidelines)

Quality or compliance issues

- may involve hardware, software, user and/or procedural quality or compliance issues that increase wastage, rework and/or increase production/installation time, and may also involve defective or inappropriate materials

RANGE STATEMENT	
	and/or equipment.
Instructions	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools and equipment • Workplace instructions, including job sheets, plans, specifications, legal compliance requirements, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer instructions for the use of equipment and materials

Unit Sector(s)

Unit sector	Security Screens and Grills (SS)
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP1001B Complete a basic upholstery project

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to prepare, fit and finish a basic upholstery product.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements including design variations, tolerances, process, materials, finish and quantity 1.2. Work sequence is planned 1.3. Procedures are determined for checking quality at each stage of the process 1.4. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.5. Suitable work area is selected for the task 1.6. Preparatory drawings/templates for tasks are confirmed 1.7. Materials are selected following work instructions 1.8. Tools and equipment suitable for the work are selected and checked for safe and effective operation
2. Fit and finish product	2.1. Material is prepared and set out according to work instructions and components are marked according to workplace procedures 2.2. Tools and equipment are used in accordance with safety requirements and manufacturer specifications 2.3. Components are prepared, including any specified shapes, angles or curves, and checked against set-out and job requirements 2.4. Components are fitted to job requirements 2.5. Assembly process is undertaken according to workplace procedures 2.6. Product is checked for compliance with specifications 2.7. Product is finished in accordance with work instructions
3. Finalise operation and maintain equipment	3.1. Work area is cleaned and hand and/or power tools and equipment are cleaned, maintained and stored in accordance with workplace procedures 3.2. Unused materials are collected and stored for reuse 3.3. Waste and scrap materials are disposed of/recycled following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination with work supervisor, other workers and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate upholstery problems, avoid re-working and wastage
- use the limited workplace technology related to this upholstery product including tools, equipment, materials and measuring devices

Required knowledge

- the interpretation of plan representation of product design
- the preparation of drawings/templates
- workflow in relation to upholstery projects
- identification of upholstery hand and/or power tools, materials, equipment, processes and procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work instructions and locate and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - achieve required production output and product quality
- Adapt or vary upholstery product designs
- Prepare, fit and finish at least one basic upholstery product which:
 - requires the fitting of fabric/leather cover to a base
 - requires assembly and attachment of appropriate trim/fittings
 - requires the use of furniture upholstery hand and power tools
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Access to plans, hand and/or power/pneumatic tools, equipment, materials, a work area and a specified outcome.

Method of assessment

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment may be conducted in conjunction with assessment of the other sector specialist unit of competency where this is appropriate.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of job role.

EVIDENCE GUIDE	
Context of assessment	Assessment may occur on the job or in a workplace simulated facility with relevant equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- OHS requirements include legislation, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
- Work involves reading and interpreting plans, developing templates, using hand and power tools, operating basic machinery, applying quality requirements and applying product finishing techniques and materials
- Work is conducted under supervision and guidance

Basic upholstery product may include but are not be limited to:

- foot stool
- headboard
- seat top for chairs
- padded blanket box
- pin cushion top box
- pin board

Project to be determined in consultation with supervisor/ teacher

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- mallets
- squares
- hand saws
- cordless drills/screwdrivers
- fixing and joining devices
- clamps
- pincers

RANGE STATEMENT	
	<ul style="list-style-type: none"> • staple gun • foam cutters • scissors • regulator • glue gun
Materials to be used may include but not limited to:	<ul style="list-style-type: none"> • timber • metal • plastics • fabric • webbing • plastic edging • foam • calico • hessian • glues • screws • nails and staples
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices. It could include safety goggles/glasses, hair net, ear muffs/plugs, gloves, footwear, protective clothing
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP2001B Use upholstery sector hand and power tools

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use hand and power tools in applications relating to the upholstery sector of the furnishing industry.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify hand and power tools	1.1.Types of hand and power tools and their functions are identified 1.2.Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3.Sources of and access to power supply are recognised
2. Select hand tools	2.1.Hand tools selected are consistent with needs of the job 2.2.Selected hand tools are checked for serviceability and safety and any faults reported to supervisor in accordance with enterprise procedures 2.3.Equipment is selected to hold or support material for hand tools application where applicable
3. Use hand tools	3.1.Material is located and held in position for hand tool application 3.2.Hand tools are safely and effectively used according to their intended use 3.3.Hand tools are safely located when not in immediate use
4. Select power tools	4.1.Power tools are selected consistent with needs of the job in accordance with conventional work practice 4.2.Power tools are visually checked for serviceability/safety in accordance with OHS requirements and any faults reported to supervisor in accordance with enterprise procedures 4.3.Equipment is selected to hold or support materials for power tool application as applicable
5. Use power tools	5.1.Material is located and held in position for power tool application as applicable 5.2.Power tools are safely and effectively used in application processes 5.3.Power tools are switched off and positioned safely when not in use
6. Clean up work area and tools	6.1.All tools are cleaned, maintained and stored 6.2.Equipment is cleaned, maintained and stored 6.3.Documentation is completed in accordance with enterprise procedures 6.4.Work area is cleared and waste removed

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to hand and power tools, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate problems, avoid re-working and wastage
- use workplace technology related to the operation and maintenance of hand and power tools

Required knowledge

- types, characteristics, uses, limitations and maintenance requirements of hand tools commonly used in furniture upholstery production
- types, characteristics, uses, limitations and maintenance requirements of power tools commonly used in furniture upholstery production
- workplace safety requirements and OHS legislation
- workflow within the workplace

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate and apply relevant information related to sector hand and power tools
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment before, during and after use of hand and power tools
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, demonstrate the ability to:
 - identify each of the upholstery sector hand and power tools
 - indicate their applications and limitations
 - effectively and safely use them in their appropriate role in the workplace environment
 - maintain and safely store them
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Furniture upholstery sector hand and power tools and materials.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which together form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment,

EVIDENCE GUIDE

	materials, work instructions and deadlines.
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • This unit covers work involving the use of hand and power tools in applications relating to the upholstery sector of the furnishing industry • OHS requirements include legislation, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements • Work requires individuals to demonstrate skill, accuracy and dexterity in the application of tools to work tasks
<p>Hand tools for furniture upholstery are to include:</p>	<ul style="list-style-type: none"> • shears/scissors • tape measure • rulers • staple remover • pincers • side cutters • pliers • hammer • screwdrivers and magnetic tack hammer
<p>Hand tools for furniture upholstery may also include:</p>	<ul style="list-style-type: none"> • button press and cutters • knife (retractable blade) • needles (bag • buttoning • regulator) • drills • web strainer • ripping chisel • web pliers • bolt cutters

RANGE STATEMENT

	<ul style="list-style-type: none"> • rotating hole punch • saws • hand planes • files and rasps • sockets • adjustable spanners • vices • clamps • wood chisels • nail punch • wire bender • seam stretcher • pipe/tube bender • stud press • pop rivet gun • no-sag spring benders (for shapes and ends) • hand ventilation setter • foam slicer • white rubber mallet • no-sag guillotine • soft tipped mallet • stuffing iron tack remover • cross pane hammer and tin snips
<p>Power tools - including pneumatic tools</p>	<p>Power tools for furniture upholstery include:</p> <ul style="list-style-type: none"> • spray adhesive system • staple gun • drills and screwdrivers • fabric cutter • nail gun • hot melt glue gun • buttoning machine • circular saw • drop saw • band saw • silicone cartridge gun • drill press • grinder • hot knife • electric iron • lacquer spray gun

RANGE STATEMENT	
	<ul style="list-style-type: none"> • knife fabric cutters (circular and straight) • electric/pneumatic foam cutter • planers and sanders
Fault reporting	Reporting of faults in the operation of hand and power tools may be verbal or written in conformance with workplace procedures
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • safety goggles/glasses • hair net • ear muffs/plugs • gloves • footwear • overalls/apron
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP2002B Fit upholstery components

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to fit upholstery components to assemble upholstered furniture.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for component application	1.1. Work instructions are used determine job requirements including design variations, tolerances, process, materials, finish, and quality 1.2. Components to be fitted are identified 1.3. Fitting sequence is determined 1.4. Procedures are determined for checking the quality at each stage of the process 1.5. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.6. Fixing devices are selected in line with work instructions and the type of materials to be used 1.7. Suitable work area is selected for the task 1.8. Components, materials, fittings and attachments are collected 1.9. Tools and equipment suitable to the applicable fitting methods are selected and checked for safe operation
2. Fitting of components	2.1. Components are laid out and attached using appropriate fastenings 2.2. Hand and power tools and equipment are used as required 2.3. Attached components are checked for compliance with specifications 2.4. Products which do not meet quality specifications are repaired or tagged for further processing or recycling/disposal in accordance with workplace practices 2.5. Finished products are organised and stored in holding area to enterprise requirements
3. Complete work	3.1. Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures 3.2. Waste and scraps are removed in accordance with workplace procedures 3.3. Tools and equipment used are cleaned, inspected for serviceable condition and stored appropriately in accordance with workplace procedures 3.4. Equipment is maintained and work area cleaned in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to hand and power tools, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate problems, avoid re-working and wastage
- use workplace technology related to the fitting of components to upholstered furniture

Required knowledge

- interpretation of plan representation for upholstered furniture items
- identification of hand and/or power tools, materials, components, equipment, processes and procedures
- workflow in relation to the assembly of upholstered furniture
- workplace procedures for problem and quality reporting

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate relevant information
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - achieve required production output and product quality
- As a minimum fit the upholstery components for three different items of upholstered furniture requiring assembly
- Work effectively with others
- Modify activities to cater for variations in workplace context and environment

Resource implications

Access to work instruction/job sheets, hand and/or power tools, equipment, materials, basic machinery and work areas.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- This unit addresses the fitting and installing of components to an item of upholstered furniture.
- Upholstery components may be upholstered or un-upholstered fittings which when assembled form an item of upholstered furniture. They may include but are not limited to:
 - actions
 - arms
 - seats
 - backs
 - legs
 - facings
 - prefabricated polished timber components
 - metal components
 - plinths
 - glides
 - ceramic and plastic fittings

Unit context

- OHS requirements include legislation, material safety management system, hazardous substances and dangerous goods codes and safe operating procedures
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the fitting of upholstery components
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements

Tools and equipment are to include:

- measuring tapes or rulers
- staple gun
- air driver
- air drill and accessories

RANGE STATEMENT	
	<ul style="list-style-type: none"> • scissors and mallets
Tools and equipment may include:	<ul style="list-style-type: none"> • air wrench • nail gun • clip gun • tack hammer • ripping chisels and staple removers
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • finished upholstery components • frames • glues • screws • nails and staples and other fixing devices
Component checking	<ul style="list-style-type: none"> • covers alignment and squareness, correct fastening, materials and attachment as per work instruction and conformity to work instructions and quality requirements
Storage area organisation	Storage area organisation is to ensure that there is no obstruction to traffic, products are not damaged in storage, incompatible items are not stored together and products are arranged to match the sequence of work
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles • hair nets • ear muffs/plugs • gloves • footwear • protective clothing
Information and procedures	<ul style="list-style-type: none"> • Manufacturer specifications and operational procedures • Work instruction, including job sheets, cutting lists, plans, drawing and designs • Workplace procedures relating to reporting and communication • Workplace procedures relating to use of tools and equipment

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP2003B Apply contemporary foundations to upholstered furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to apply contemporary upholstery foundations to upholstered furniture.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work order or instructions are used to confirm type of contemporary furniture foundations to be applied 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Attaching methods are identified and fitting sequence is determined 1.4. Suitable work area is selected and prepared 1.5. Tools and hardware for the application of the foundation are selected and checked for safe operation 1.6. Contemporary foundation components are selected as required
2. Attach contemporary foundation	2.1. Mounting points are measured and marked on the frame, as required 2.2. Contemporary foundation is positioned and appropriate fasteners are used to secure it to the item 2.3. The applied foundation is inspected for fit, finish and quality with those requiring reworking/refitting being tagged for further reprocessing or recycling/disposal in accordance with workplace practices 2.4. Process is monitored and conditions which may affect quality standards are noted 2.5. Variations to normal activities are reported in accordance with workplace procedures 2.6. Authorised changes in standard operating procedures and work order or instructions are implemented
3. Complete work	3.1. Workplace documentation, including stock usage, is completed in accordance with workplace procedures 3.2. Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures 3.3. Waste and scrap are removed in accordance with workplace procedures 3.4. Tools and equipment used are cleaned, inspected for serviceable condition and stored in accordance with workplace procedures 3.5. Equipment is maintained and work area is cleaned in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to hand and power tools, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate problems, avoid re-working and wastage
- use workplace technology related to the application of contemporary foundations to upholstered furniture

Required knowledge

- workflow in relation to furniture production
- features of range of contemporary foundation types and fittings
- materials used in the application of contemporary foundations
- identification of equipment, processes and procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Operate equipment associated with the preparation and application of furniture foundations
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, using contemporary foundation items (such as interlaced elastic webbing, no-sag springs and foam), assemble contemporary foundations for three items of furniture, one being a chair, requiring seat, back and arms
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Furniture frames and contemporary fittings such as webbing stock, no-sag springs, padding materials, tools and equipment, work order and procedures.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- Contemporary foundations are applied to contemporary upholstered furniture. Normally this is part of a production process and includes mass-produced items.
- Contemporary foundations may include but are not limited to:
 - elastic webbing
 - nylon webbing
 - no-sag springs
 - conical springs
 - pulma flex
 - plastic and styrene edging
 - foam and polyester fibre

Unit context

- OHS requirements include legislation, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the application of upholstered components to furniture items
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements

Tools and equipment may include, but are not limited to:

- scissors
- upholstery hammer
- nail gun
- staple gun
- pincers
- long-nose pliers and tape measures

Materials to be applied may

- elastic webbing

RANGE STATEMENT	
include, but are not limited to:	<ul style="list-style-type: none"> • nylon webbing • coil springs • spiral springs • no-sag springs • pulma flex • plastic and styrene edging • foam • hessian and polyester fibre
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulation and enterprise policies and practices for overhead lifting. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggle • hair nets • ear muffs/plugs • gloves • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP2004B Machine sew upholstery final cover materials (basic)

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to sew upholstery final cover materials using simple sewing machines and techniques.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Job requirements are identified from work instructions 1.2. Workplace health and safety requirements, including personal protection needs, are observed 1.3. Machines, materials, work method and sequence are determined 1.4. Equipment, including any supplementary equipment is identified and checked for safe operation, components and controls 1.5. Materials are identified and inspected and problems, including any materials or part constructed products which do not meet the job order requirements, are identified and reported in accordance with workplace procedures 1.6. Work pieces are laid out in sequence in accordance with specifications and workplace procedures
2. Control sewing operation	2.1. Sewing machine, including attachments, is set up and adjusted for the work requirements 2.2. Machine is operated to maintain required product quality and outputs 2.3. Finished products are checked for required quality, repaired, and moved to the next process
3. Complete work	3.1. Completed work is directed to the next operation in accordance with workplace procedures 3.2. Documentation, including production and/or stock records and/or packing slips, are completed in accordance with workplace procedures 3.3. Material which is able to be re-used is collected and stored, and waste and scrap are removed in accordance with workplace procedures 3.4. Equipment is maintained and work area is cleaned following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to machine sewing, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate problems, avoid re-working and wastage
- use workplace technology related to the basic machine sewing of upholstery final cover materials

Required knowledge

- procedure for reporting damaged or imperfect products or interruption to workflow
- workflow requirements for sewing process
- operation of work systems and sewing equipment
- characteristics of materials used and finished products
- causes of faults and repair methods
- identification of equipment, processes and procedures
- quality systems and standards
- workplace procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Interpret work order and locate and apply relevant information • Identify and operate sewing machines • Set up sewing machine for operations, monitor quality of output and adjust as necessary • Follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> • minimise the risk of injury to self and others • prevent damage to goods, equipment and products • maintain required production output and product quality • As a minimum, demonstrate the ability to: <ul style="list-style-type: none"> • join final cover materials for fitting to two items of upholstered furniture • sew piping for an item of upholstered furniture • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
<p>Resource implications</p>	<p>Appropriate sewing machines, work orders, operating procedures, materials and threads.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit addresses the sewing of final cover upholstery materials using simple machines and techniques
Unit context	<ul style="list-style-type: none"> • Workplace health and safety includes OHS legislation, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of machines • Work is carried out in accordance with statutory requirements, organisation insurance requirements, OHS legislation, environmental legislation, manual handling procedures and relevant health regulations
Basic sewing	Basic sewing is the ability to operate and adjust a simple sewing machine (straight and walking foot sewing machines) to join two or more pieces of upholstery fabric together
Job requirements may include:	<ul style="list-style-type: none"> • materials • threads • additional work features • shape and any special requirements for the item • and any required workplace documentation to be completed
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • flat bed • walking foot • overlocker
Sewing machine set up and adjustments are to include:	<ul style="list-style-type: none"> • threading machine and winding bobbin • setting required tensions • selecting required machine settings • lubricating and adjusting the machine

RANGE STATEMENT	
	<ul style="list-style-type: none"> • and testing operations for work order requirements
Materials to be machined may include but are not limited to:	<ul style="list-style-type: none"> • fabrics • vinyl and canvas
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles • hair nets • ear muffs/plugs • gloves • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machines • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP2005B Develop cutting plan and cut single layer upholstery fabric

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to develop a cutting plan, measure out and cut single layer upholstery fabrics.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop cutting plan	1.1. Required fabrics, number of items to be cut and required equipment are identified 1.2. Fabric sizes to be cut are identified from work order plus any required allowances 1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work. 1.4. Suitable work area is selected, prepared and cleaned of any contaminants 1.5. Work sequence is planned
2. Prepare materials for cutting	2.1. Suitable scissors, cutting machines, knives and/or blades are selected and checked prior to use for appropriate sharpness, set, operation and safe condition 2.2. Fabrics are selected in accordance with work order and laid out smooth and square 2.3. Fabrics are inspected for flaws and appropriate finish 2.4. Nap/pile direction, pattern matches and face of the materials are identified 2.5. Tools and equipment are checked for operation 2.6. Fabric is measured and marked, including registration points, in accordance with workplace practices 2.7. Cutting plan is developed in accordance with workplace procedures
3. Cut fabric	3.1. Fabric is cut in accordance with manufacturers' instructions and/or workplace procedures 3.2. Problems are notified following workplace procedures 3.3. Cut item is inspected against work requirement with unsatisfactory items being reprocessed in accordance with workplace procedures
4. Complete work	4.1. Cutting is completed with cut out materials top edge marked, wrapped, identified/labelled, handled and stored as required by workplace procedures 4.2. Workplace required documentation is completed in accordance with workplace procedures 4.3. Unused fabric and waste are collected for recycling/reuse in accordance with workplace

ELEMENT	PERFORMANCE CRITERIA
	procedures 4.4. Tools and equipment are maintained and work area is cleaned in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with site supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the worksite and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, estimate fabric requirements and estimate other material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use the limited workplace technology related to planning and cutting upholstery fabric including tools, equipment, calculators and measuring devices.

Required knowledge

- work requirements including workplace standards
- workflow in relation to planning and cutting upholstery fabric
- fabric types, common faults and inspection procedures
- design features of the finished items in relation to attractive use of fabric patterns

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Apply safe handling practices for equipment, products and materials
- Identify materials used and any special marking out requirements
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Develop cutting plan, measure accurately, mark out and cut upholstery fabric quantities, minimising waste and producing consistent quality items for at least five different types of material or products (at least one of which should be patterned)
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Work orders, fabrics, tape measure, cutting table, cutting machines, cutting knives and blades, scissors and workplace procedures

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant resilient sheet installation equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- This unit applies to the cutting of upholstered fabrics from measurements and instructions. It does not apply to cutting from patterns.
- Fabrics may be plain or patterned and include, but are not limited to:
 - velour
 - velvet
 - tapestry
 - damask
 - linen
 - cotton

Unit context

- Workplace health and safety requirements may include OHS legislation, material safety management systems, hazardous and dangerous goods codes and safe operating procedures
- Work is carried out in accordance with statutory requirements, relevant health regulations, environmental legislation, manual handling procedures and organisation insurance requirements
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the planning and the cutting of upholstery fabric

Tools and equipment may include, but are not limited to:

- cutting equipment including scissors and cutting machines; knives and/or blades
- hot knife (for acrylics)
- measuring and calculating equipment including tapes
- rulers
- calculators
- computers and cutting table

RANGE STATEMENT	
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • glasses/goggles • hair net • ear muffs/plugs • gloves • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions. These include: <ul style="list-style-type: none"> • job sheets • cutting lists • plans • drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

Co-requisite units		

LMFUP2006B Dismantle/reassemble furniture for upholstery

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to dismantle and reassemble furniture and/or fittings for the purposes of fitting/refurbishing upholstery.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Item to be dismantled is inspected and components identified 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Work required, including the process/order for dismantling according to the workplace procedures, is identified 1.4. Tools and equipment are selected and checked for safe and effective operation for the task
2. Dismantle furniture	2.1. Items to be dismantled are identified 2.2. Items are dismantled to the extent required in the work instructions using appropriate tools and procedures 2.3. Any previous upholstery is noted for wear, condition and application techniques 2.4. Fasteners and attachments are removed and stored 2.5. Component parts are separated, tagged and stored following workplace procedures 2.6. Component parts dispatched to the next process according to workplace procedures
3. Reassemble furniture	3.1. Items to be reassembled are identified 3.2. Items are reassembled to the extent required in the work instructions using appropriate tools and procedures 3.3. Upholstered components are noted for the security and condition of the upholstered fittings 3.4. Fasteners and attachments are selected and used according to workplace procedures 3.5. Assembled piece is dispatched to the next process according to workplace procedures
4. Complete work	4.1. Equipment used is cleaned, inspected for serviceable condition and stored in accordance with workplace procedures 4.2. Equipment faults are identified, tagged and reported to appropriate personnel 4.3. Work area is cleaned and returned to operational condition

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, furniture construction methods, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with area supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate dismantling/reassembly problems, avoid re-working and wastage
- use the workplace technology related to dismantle/reassemble furniture including tools, equipment, materials and measuring devices

Required knowledge

- the types and characteristics of materials used in furniture/furnishings construction
- construction techniques and processes
- upholstery materials and processes
- identification of equipment, processes and procedures
- workflow in relation to dismantling and reassembling furniture

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Locate, interpret and apply relevant information
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
- Identify materials, including upholstery materials and techniques, used in the construction of the item being dismantled/re-assembled
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- Dismantle and re-assemble at least four different items including an armchair and a sofa or equivalent
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Upholstered furniture for dismantling/re-assembling, work instructions, tools and equipment.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and generally be in conjunction with assessment of other units of competency which together form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- OHS requirements include legislation, material safety management systems, hazardous substances and dangerous goods codes and local safe operating procedures
- Work requires individuals to demonstrate some discretion, judgement and problem solving skills during the process of dismantling and reassembling furniture
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements

Furniture and/or furnishings may include but are not limited to:

- chairs
- sofas
- settees
- footstools
- beds and their components

Work can involve dismantling and re-assembling of furniture for installing/refurbishing upholstery.

Tools and equipment may include, but are not limited to:

- measuring tapes or rulers
- hammers
- rubber mallet
- pincers
- screwdrivers
- shifting spanner
- spanners
- socket set
- hacksaw and blades
- clamps
- timber wedges
- wood chisels
- dowel drill

RANGE STATEMENT	
	<ul style="list-style-type: none"> • long-nose pliers • floor board lifter • bricklayer's bolster • power drill/screwdriver • air compressor and hoses
Materials to be used may include but are not limited to:	<ul style="list-style-type: none"> • timber • manufactured board • veneer • brass • adhesive • laminate • perspex • upholstered fittings and foundations
Personal protective equipment	Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices. It may include safety goggles/glasses, hair nets, ear muffs/plugs, gloves, footwear and protective clothing.
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use of tools and equipment • Work instructions, including job sheets, cutting lists, plans, drawings and designs • Workplace procedures relating to reporting and communication • Manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP3001B Apply traditional foundations to upholstered furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to apply traditional upholstery foundations to upholstered furniture.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan operation	<ul style="list-style-type: none"> 1.1. Work order or instructions are used to confirm type of traditional furniture foundations to be applied 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Attaching methods are identified and fitting sequence is determined 1.4. Suitable work area is selected and prepared 1.5. Tools and hardware for the application of the foundation are selected and checked for safe operation 1.6. Traditional foundation components are selected as required
2. Prepare and attach traditional foundation	<ul style="list-style-type: none"> 2.1. Mounting points are measured and marked on the frame, as required 2.2. Traditional foundation is positioned and appropriate fasteners are used to secure it to the item 2.3. Appropriate fasteners are used to secure the traditional foundation, as required 2.4. The applied foundation is inspected for fit, finish and quality with those requiring reworking/refitting being tagged for further reprocessing or recycling/disposal in accordance with workplace practices 2.5. Process is monitored and conditions which may affect quality standards are noted 2.6. Variations to normal activities are reported within workplace procedures 2.7. Authorised changes in standard operating procedures and work order or instructions are implemented
3. Complete work	<ul style="list-style-type: none"> 3.1. Workplace documentation, including stock usage, is completed in accordance with workplace procedures 3.2. Faulty and/or defective equipment is tagged and reported in accordance with workplace procedures 3.3. Waste and scrap are removed in accordance with workplace procedures 3.4. Tools and equipment used are cleaned, inspected for serviceable condition and stored appropriately in accordance with workplace procedures 3.5. Equipment is maintained and work area is cleaned in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise component and material sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the limited workplace technology related to the application of traditional foundations to upholstered furniture

Required knowledge

- workflow in relation to furniture production and refurbishment
- features of range of traditional foundation types and fittings
- materials and techniques used in the application of contemporary foundations to upholstered furniture
- materials used in the application of traditional foundations
- identification of equipment, processes and procedures required for the application of traditional foundations to upholstered furniture

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Operate tools and equipment associated with the preparation and application of furniture foundations
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, interlace and turn back jute webbing, tie off and lace up coil springs, fit hessian bridles (loose and/or deep), coconut fibre, wadding and a stitched edge (one blind, one top) in two items of traditional upholstered furniture
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Furniture frames and traditional fittings such as webbing stock, coil springs, padding materials, tools and equipment.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which together form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- Traditional foundations are applied to traditional upholstered furniture, either during construction or refurbishment. Normally this involves the use of traditional materials and techniques, which may involve working by hand and application on a one-off basis.
- Traditional foundations include, but are not limited to:
 - jute webbing
 - coil springs
 - coconut fibre
 - flock
 - horse hair
 - wadding
 - linters
 - calico
 - hessian
 - jute twine

Unit context

- OHS requirements include legislation, material safety management system, hazardous substances and dangerous goods codes and safe operating procedures
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of machines
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements

Tools and equipment may include, but are not limited to:

- tape measure
- web strainer
- scissors
- upholstery hammer

RANGE STATEMENT	
	<ul style="list-style-type: none"> • tack lifter • staple gun • pincers and long-nose pliers
Materials to be applied may include, but are not limited to:	<ul style="list-style-type: none"> • webbing • coil springs • flock • wadding • coconut fibre • bridle • bridle ties • solid timber base • padded frames • hard edge • hessian • calico • lacing twine and mattress twine
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles • hair nets • ear muffs/plugs • gloves • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operation of tools • Workflow in relation to the components of and assembly of upholstered furniture • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP3002B Fit and apply final cover materials to furniture using basic techniques

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to fit and apply plain and patterned materials as the final covering to upholstered furniture using basic techniques.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Specifications concerning design, fabrics, accessories and finish are confirmed with designer/customer/client, as required 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Materials, work method and sequence are determined 1.4. Suitable work area is selected, prepared and cleaned of any contaminants 1.5. Appropriate equipment and tools are selected and checked for safe operation 1.6. Furniture frames/foundations are checked for quality of construction, contaminants and appropriateness to specifications, and modified and/or repaired in accordance with workplace procedures 1.7. Material panels are checked in terms of quantity, quality, contaminants, size, pattern and consistency 1.8. Trims are selected and checked in terms of quantity, quality, contaminants, size, pattern and consistency
2. Fit and apply fabric	2.1. Work pieces are laid out in sequence according to specifications, construction process and workplace procedures 2.2. Materials are applied to furniture in accordance with enterprise and industry standards 2.3. Material is secured to the foundation, using appropriate fixing processes 2.4. Finish of applied material is checked against quality standards 2.5. Work pieces are laid out in sequence according to specifications and workplace procedures
3. Fit and apply fabric and trim	3.1. Trims are applied consistent with specifications and workplace procedures 3.2. Trims are checked against quality standards and reprocessed if required, in accordance with workplace procedures 3.3. Final adjustments are made to ensure finish meets required quality standards
4. Complete work	4.1. Finished product is packaged, protected and stored, as required, consistent with workplace procedures 4.2. Workplace documentation is completed in

ELEMENT	PERFORMANCE CRITERIA
	<p>accordance with procedures</p> <p>4.3. Waste and scrap are collected for disposal/recycling in accordance with workplace procedures</p> <p>4.4. Tools and equipment used are cleaned, inspected for serviceability and stored in accordance with workplace procedures</p> <p>4.5. Equipment is maintained and work area is cleaned in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to hand and power tools, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate problems, avoid re-working and wastage
- use workplace technology related to the application of final cover materials to upholstered furniture

Required knowledge

- work requirements, including workplace standards
- workflow in relation to applying final material covers to furniture
- material types and characteristics, common faults and inspection procedures
- types of basic techniques and their application
- design features of the finished furnishing items

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Identify and select materials used and any special handling requirements for those materials
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum:
 - fit and apply a patterned fabric cover to a drop in seat
 - fit and apply a cover in a plain material other than fabric for a seat, back and arms of a chair
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate tools and equipment, cover materials, trims, furniture frames and foundations, fixing materials and tools, work order, workplace information including work procedures and/or equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which together form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Unit context</p>	<ul style="list-style-type: none"> • Workplace health and safety includes OHS legislation, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the application of covers to furniture foundations • Work is carried out in accordance with legislative obligations, relevant health regulations, environmental legislation, manual handling procedures and organisation insurance requirements
<p>Final cover materials include but are not limited to:</p>	<ul style="list-style-type: none"> • plain and patterned fabrics • vinyl and velvet
<p>Tools and equipment may include, but are not limited to:</p>	<ul style="list-style-type: none"> • sewing machine • needles • scissors • staple gun • hammer • tack hammer and glue gun
<p>Materials to be machined may include but are not limited to:</p>	<ul style="list-style-type: none"> • plain and patterned fabric • vinyl and velvet
<p>Other materials may include:</p>	<ul style="list-style-type: none"> • piping • double piping • cords • gimp • glues • staples • buttons • tacks • tingles and antique nails

RANGE STATEMENT	
Material application requirements	Material applications are to ensure that patterns, naps/pile, sheens, direction of pattern, pattern repeat and finished side of the materials are positioned appropriate to the design, the smooth and consistent finish of the material over the furniture foundation, and weaving lines are straight and square to each other
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles • hair nets • ear muffs/plugs • gloves • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operations of tools • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Customer/client requirements

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP3003B Fit and apply final cover materials to furniture using decorative techniques

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to fit and apply materials as the final covering to upholstered furniture using decorative techniques.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<ul style="list-style-type: none"> 1.1. Specifications concerning design, fabrics, accessories and finish are confirmed with designer/customer/client, as required 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Materials, work method and sequence are determined 1.4. Suitable work area is selected, prepared and cleaned of any contaminants 1.5. Appropriate equipment and tools are selected and checked for safe operation 1.6. Furniture frames/foundations are checked for quality of construction, contaminants and appropriateness to specifications, and modified and/or repaired in accordance with workplace procedures 1.7. Material panels are checked in terms of quantity, quality, contaminants, size, pattern and consistency 1.8. Trims are selected and checked to in terms of quantity, quality, contaminants, size, pattern and consistency
2. Fit and apply material	<ul style="list-style-type: none"> 2.1. Work pieces are laid out in sequence according to specifications, construction process and workplace procedures 2.2. Fabrics are applied to furniture in accordance with enterprise and industry standards 2.3. Decorative features are applied to the materials, as required 2.4. Material is secured to the foundation, using appropriate fixing processes 2.5. Finish of applied material is checked against quality standards 2.6. Work pieces are laid out in sequence according to specifications and workplace procedures
3. Fit and apply trim and decorative features	<ul style="list-style-type: none"> 3.1. Trims and decorative finishes are applied consistent with specifications and workplace procedures 3.2. Trims and decorative finishes are checked against quality standards and modified and or repaired, as required 3.3. Final adjustment are made, as required, to ensure finish meets required quality standards

ELEMENT	PERFORMANCE CRITERIA
4. Complete work	4.1. Finished product is packaged, protected and stored, in accordance with workplace procedures 4.2. Workplace documentation is completed in accordance with procedures 4.3. Waste and scrap are collected for disposal/recycling in accordance with workplace procedures 4.4. Tools and equipment used are cleaned, inspected for serviceability and stored in accordance with workplace procedures 4.5. Equipment is maintained and work area is cleaned in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise component and material sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the limited workplace technology related to the application of final material covers to upholstered furniture using decorative techniques

Required knowledge

- work requirements including workplace standards
- workflow in relation to applying final material covers to upholstered furniture using decorative techniques
- cover material types and characteristics, common faults and inspection procedures
- types of decorative techniques and their application
- design features of the finished furnishing items

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Identify and select materials used and any special handling requirements for those materials
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, fit and apply a final material cover for:
 - a bedhead using diamond buttoning
 - a chair using other decorative finishes
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate tools and equipment, plain and patterned fabrics, trims, furniture frames and foundations, fixing materials and tools, work order, workplace information including work procedures and/or equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Unit context</p>	<ul style="list-style-type: none"> • OHS requirements include legislation, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the application of fabrics to furniture foundations
<p>Legislative/regulatory requirements</p>	<p>Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements</p>
<p>Final cover materials include but are not limited to:</p>	<ul style="list-style-type: none"> • plain and patterned fabrics • vinyl and velvet
<p>Decorative techniques include, but are not limited to:</p>	<ul style="list-style-type: none"> • pleating • fluting • stab and deep buttoning (bun • diamond and elongated)
<p>Tools and equipment may include, but are not limited to:</p>	<ul style="list-style-type: none"> • sewing machine • scissors • staple gun • hammer • tack hammer • glue gun • regulator • buttoning needles and spring wire bender
<p>Sewing machines include but are not limited to:</p>	<ul style="list-style-type: none"> • overlocking machine and twin needle machine
<p>Materials/fabrics to be machined may include but are not limited to:</p>	<ul style="list-style-type: none"> • vinyl • plain and patterned fabric • velvet

RANGE STATEMENT	
Other materials may include:	<ul style="list-style-type: none"> • piping • cords • buttons • pleats • glues • staples • buttons • tacks • tingles • antique nails
Fabric application requirements	Fabric applications are to ensure that patterns, naps, sheens, direction of pattern, pattern repeat and finished side of the materials are positioned appropriate to the design, the smooth and consistent finish of the fabric over the furniture foundation, and weaving lines are straight and square to each other.
Personal protective equipment:	<ul style="list-style-type: none"> • Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include: <ul style="list-style-type: none"> • safety glasses/goggles • hair nets • ear muffs/plugs • gloves • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the use and operations of tools • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Customer/client requirements

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP3004B Lay out patterns and cut leather

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to select leather hides, lay out patterns and cut out leather by hand to the required shape or pattern.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Specifications, patterns and/or plans are read and interpreted to identify required colour and quality of materials, number of items to be cut and tools and equipment required</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.3. Suitable work area is selected, prepared and cleaned of any contaminants</p> <p>1.4. Pattern pieces are identified to match shapes to final wear characteristics of the furnishing component</p> <p>1.5. Suitable scissors and/or blades are selected for the leather to be cut</p> <p>1.6. Scissors and any other tools and equipment are checked prior to use for appropriate sharpness, operation and safe condition</p> <p>1.7. Hide is selected, spread out and inspected to identify flaws and harder and softer wearing parts</p> <p>1.8. Direction of natural markings and finished side of the leather are identified</p>
2. Lay out pattern	<p>2.1. Patterns are laid out following workplace procedures and instructions using low wear parts of the hide on the less heavily used furniture components</p> <p>2.2. Patterns are laid out to maximise use of the hide for the furniture design</p> <p>2.3. Any registration points on the pattern and other instructions to match required pattern components are marked</p> <p>2.4. Any required measurements are made and appropriate adjustments made</p>
3. Cut leather	<p>3.1. Required cutting operations are completed with cut out leather components identified in accordance with work instructions and procedures</p> <p>3.2. Cut work is inspected, any faults identified and appropriate action taken in accordance with workplace procedures to ensure cut pieces meet the required quality standards</p> <p>3.3. The performance of the cutting equipment is regularly checked for signs of faulty operation, including evidence from the inspection of cut pieces</p> <p>3.4. Where required, cut out components are wrapped</p>

ELEMENT	PERFORMANCE CRITERIA
	using appropriate protective covers and care label information is attached
4. Complete work	4.1. Unused materials are stored as required 4.2. Cut components are folded, protected and despatched to next process following workplace procedures 4.3. Work area is cleaned and damaged tools tagged as required 4.4. Waste is collected and bundled for recycling/reuse as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to hand and power tools, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate problems, avoid re-working and wastage
- use the limited workplace technology related to cutting leather

Required knowledge

- work requirements including workplace standards and inspection procedures
- leather types, common faults, wear capability of different parts of the hide
- workflow in relation to cutting leather
- design features of the finished furnishing items in relation to laying out the pattern and cutting the leather

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Identify and select leathers and any special laying out and cutting requirements for different hide parts
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, given hides and patterns:
 - identify and select leather for a leather armchair
 - measure and cut selected leather to match these patterns
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate scissors and cutting blades, leather, patterns, work order, workplace information, including work procedures and/or equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit addresses the selection, laying out and cutting of leather hides into components for upholstered furniture
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, material safety management system, hazardous substances and dangerous goods codes and safe operating procedures • Work requires individuals to demonstrate discretion, judgement and problem solving skills in identifying the qualities and in the cutting of leather to patterns provided • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
Leather hide	<ul style="list-style-type: none"> • Leather hide for leather upholstered furniture must be of a suitable thickness and quality. It may be a full hide or partial. • Leather characteristics/qualities include: <ul style="list-style-type: none"> • natural markings • finished and unfinished sides • high and low wear • direction of markings • flaws and blemishes • colour variation between hides • flexibility
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • scissors • cutting blades and electric shears
Materials	Leather hides of upholstery quality, patterns
Personal protective equipment:	Personal protective equipment is to include that prescribed under legislation, regulations and

RANGE STATEMENT	
	<p>enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles • hair nets • ear muffs/plugs • gloves • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Workflow in relation to the selection and cutting of leather • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Knowledge of features and use of the finished upholstered item

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP3005B Machine sew upholstery final cover materials (complex)

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use specific sewing machine techniques, with attachments as required, to sew upholstery final cover materials.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Job requirements are identified from work instructions 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Machines, attachments, materials, work method and sequence are determined 1.4. Equipment, including any supplementary equipment, is identified and checked for safe operation, components and controls 1.5. Materials are identified and inspected and problems, including any materials or part-constructed products which do not meet the job order requirements, are identified and reported in accordance with workplace procedures 1.6. Work pieces are laid out in sequence in accordance with specifications and workplace procedures
2. Conduct sewing operation	2.1. Sewing machine, including attachments, is set up and adjusted for the work requirements 2.2. Machine is operated to maintain required product quality and outputs 2.3. Finished products are checked for required quality, repaired, and moved to the next process
3. Complete work	3.1. Completed work is directed to the next operation in accordance with workplace procedures 3.2. Documentation, including production and/or stock records and/or packing slips are completed in accordance with workplace procedures 3.3. Material which is able to be reused is collected and stored, waste and scrap are removed in accordance with workplace procedures 3.4. Equipment maintenance and work area clean up are completed following workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise component and material sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the workplace technology related to the complex machine sewing of upholstery final cover materials

Required knowledge

- procedure for reporting damaged or imperfect products or interruption to workflow
- workflow requirements for sewing process
- operation of work systems and sewing equipment
- characteristics of materials used and finished products
- causes of faults, and repair methods
- identification of equipment, processes and procedures
- quality systems and standards
- workplace procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Identify and select materials used and any special handling requirements for those materials
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, complete a double sided square stool top with double stitched quartering of different materials
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate sewing machines, work orders, operating procedures, materials and threads.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- Complex sewing involves the operation of industrial sewing machines to produce specialised products in the application of upholstery to furniture. It embraces a range of decorative methods and finishes
- Specific and specialised techniques and products include:
 - sewing twin needle decorative finishes, including: single and double piping, blind hemming, balloon seam and gathering
 - sewing with specialised attachments, including: gathering
 - sewing fasteners and attachments, including sewing of: zips, velcro

Unit context

- Workplace health and safety includes OHS legislation, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of specialised sewing machines
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements

Job requirements include:

- required materials
- threads
- additional work features
- shape and special requirements for the finished item
- and any required workplace documentation to be completed

RANGE STATEMENT	
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • flat bed • walking foot • overlocker • post and/or flatbed twin needle
Sewing machine set up and adjustments include:	<ul style="list-style-type: none"> • threading machine and winding bobbin • setting required tensions • selecting required machine settings • lubricating and adjusting the machine • and testing operations for work order requirements
Materials to be machined may include but are not limited to:	<ul style="list-style-type: none"> • fabrics • vinyl • canvas • acrylics and leather
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles • hair nets • ear muffs/plugs • gloves • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of sewing machines • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP3006B Fit and apply leather to furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to fit and apply leather to furniture.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Specifications concerning design, leather coverings, accessories and finish are confirmed with designer/customer/client, as required</p> <p>1.2. Workplace health and safety requirements, including personal protective needs, are observed throughout the work</p> <p>1.3. Materials, work method and sequence are determined</p> <p>1.4. Suitable work area is selected, prepared and cleaned of any contaminants</p> <p>1.5. Appropriate equipment and tools are selected and checked for safe operation</p> <p>1.6. Furniture frames/foundations are checked for quality of construction, contaminants and appropriateness to specifications, and modified and/or repaired in accordance with workplace practices</p> <p>1.7. Leather panels are checked in terms of quantity, quality, grain, contaminants, size and wear stress</p> <p>1.8. Trims are selected and checked in terms of quantity, quality, contaminants, size, pattern and consistency</p>
2. Fit and apply leather	<p>2.1. Work pieces are laid out in sequence according to specifications, construction process and workplace procedures</p> <p>2.2. Leather pieces are applied to furniture ensuring that appropriate leather is fitted to high wear areas and a smooth and consistent finish of the leather over the furniture foundation</p> <p>2.3. Decorative features, including pleats are applied to the leather, before fitting as required</p> <p>2.4. Leather is secured to the foundation, using appropriate fixing processes</p> <p>2.5. Finish of applied leather is checked against quality standards</p>
3. Apply trim	<p>3.1. Work pieces are laid out in sequence according to specifications and workplace procedures</p> <p>3.2. Trims and decorative finishes are applied to the item consistent with specifications and workplace procedures</p> <p>3.3. Trims and decorative finishes are checked against quality standards and modified and or repaired, as required</p>

ELEMENT	PERFORMANCE CRITERIA
	3.4. Final adjustments are made, as required, to ensure finish of completed item meets required quality standards
4. Complete work	4.1. Finished product is packaged, protected and stored, in accordance with workplace procedures 4.2. Workplace documentation is completed in accordance with procedures 4.3. Waste and scrap are collected for disposal/recycling in accordance with workplace procedures 4.4. Tools and equipment used are cleaned, inspected for serviceability and stored in accordance with workplace procedures 4.5. Equipment is maintained and work area is cleaned in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to hand and power tools, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area to avoid any back tracking, workflow interruptions or wastage
- work with others in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate problems, avoid re-working and wastage
- use the limited workplace technology related to the fitting and application of leather to furniture

Required knowledge

- work requirements including workplace standards
- workflow in relation to applying leather to furniture
- leather types and their characteristics, common faults and inspection procedures
- appropriate quality and fit of finished product
- design features of the finished furnishing items

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Identify and select materials used and any special handling requirements for those materials
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, given cut leather pieces, fit and apply leather to a chair
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate tools and equipment, leather panels, trims, furniture frames and foundations, work order, workplace information including work procedures and/or equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit addresses the fitting and application of leather, pre-cut to pattern, to an upholstered item of furniture
Unit context	<ul style="list-style-type: none"> • Workplace health and safety includes OHS legislation, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the application of leather to furniture foundations • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
Leather	<ul style="list-style-type: none"> • Leather is an upholstery cover material with unique characteristics which must be considered during preparation and fitting to ensure it is effectively applied to the furniture item. • Leather characteristics/qualities include: <ul style="list-style-type: none"> • natural markings • finished and unfinished sides • high and low wear • direction of markings • flaws and blemishes • colour variation between hides • flexibility
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • scissors • single or multi-needle flat bed sewing machine • heat gun • hammer

RANGE STATEMENT	
	<ul style="list-style-type: none"> • staple gun • skivering machine and hand sewing needles
Materials may include, but are not limited to:	<ul style="list-style-type: none"> • glues • staples • buttons • tacks • piping • cords • banding • hidem binding and pleats
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles • hair net • ear muffs/plugs • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machinery • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication • Customer/client requirements

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP3007B Manufacture and fit loose covers

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to develop patterns, cut, sew and fit loose covers to upholstered furniture.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Specifications concerning design, fabrics, accessories and finish are confirmed with designer/customer/client, as required 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Materials, work method and sequence are determined 1.4. Suitable work area is selected, prepared and cleaned of any contaminants 1.5. Appropriate equipment and tools are selected and checked for safe operation
2. Develop patterns	2.1. 3D templates are developed from the surface of the existing furniture, without undue distortion 2.2. Component shapes are marked out and/or cut out using appropriate technique 2.3. Standard 2D patterns are produced in accordance with specifications and to accepted standards and construction tolerances 2.4. Patterns are reviewed against client specifications and production requirements 2.5. Consultation and clarification with client is undertaken, as required
3. Select and cut fabric	3.1. Fabrics are selected and inspected in accordance with work order and laid out smooth and square 3.2. Nap/pile, direction of pattern, pattern repeat and finished side of the materials are identified 3.3. Fabrics are squared up to the edges or guide markings on the cutting table 3.4. Patterns are laid out using registration points on the pattern and other instructions to match required fabric pattern, ensuring maximum use of the fabric 3.5. Fabric is cut and cut components are inspected in accordance with workplace procedures
4. Sew panels	4.1. Sewing machine set up requirements and adjustments are identified and followed 4.2. Machine sewing maintains required product quality and outputs 4.3. Finished loose covers are checked for required quality and reprocessed in accordance with workplace procedures

ELEMENT	PERFORMANCE CRITERIA
5. Fit and finish cover	5.1. Loose cover is applied to the upholstered furniture and checked for fit 5.2. Decorative accessories are applied as required 5.3. Adjustments are made, as required, to ensure fit meets required quality standards and specifications
6. Complete work	6.1. Workplace documentation is completed in accordance with procedures 6.2. Waste and scrap are collected and disposed of/recycled in accordance with workplace procedures 6.3. Tools and equipment used are cleaned, inspected for serviceability and stored in accordance with workplace procedures 6.4. Equipment is maintained and work area is cleaned in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to hand and power tools, work orders, maintenance systems and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area to avoid any back tracking, workflow interruptions or wastage
- work with others in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate problems, avoid re-working and wastage
- use the limited workplace technology related to the manufacture and fitting of loose covers to upholstered furniture

Required knowledge

- work requirements including workplace standards and workflow
- fabric types and characteristics, common faults and inspection procedures
- design features of the finished furnishing items in relation to laying out the pattern and cutting the fabrics

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Identify and select materials used and any special handling requirements for those materials
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum:
 - develop two patterns for loose covers for given items of furniture (one plain and one patterned)
 - measure and cut fabrics to required size and accuracy, matching any patterns
 - sew fabric and fit to items of furniture
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate tools and equipment, plain and patterned fabrics, sewing machines, furniture to be upholstered, work order, workplace information including work procedures and/or equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit addresses the development of a pattern to meet a requirement, cutting from that pattern and the fitting of loose covers to items of upholstered furniture.
Unit context	<ul style="list-style-type: none"> • Workplace health and safety includes OHS legislation, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the manufacturing and fitting of loose covers • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • single or multi-needle flat bed • walking foot • overlocker and gatherer
Sewing machine set up and adjustments include:	<ul style="list-style-type: none"> • threading machine and winding bobbin • setting required tensions • selecting required machine settings • lubricating and adjusting the machine • and testing operations for work order requirements
Materials to be machined may include but are not limited to:	<ul style="list-style-type: none"> • plain and pattern fabric • velvet
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles

RANGE STATEMENT	
	<ul style="list-style-type: none"> • hair net • ear muffs/plugs • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the development of patterns and setting and operation of machinery • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP3008B Apply finishing techniques to upholstered furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to hand finish upholstered furniture by the application of concealed and decorative finishing techniques.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Job requirement is identified from work order or other instructions which will include any special requirements for finishing 1.2. Required materials, upholstered components to be finished and appropriate tools and equipment are identified from work order 1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.4. Items to be finished are assembled in an appropriate work area and inspected for appropriate quality 1.5. Appropriate tools, equipment and finishing materials and hardware are selected
2. Apply finishing techniques	2.1. Finishing techniques are applied in accordance with workplace procedures 2.2. Problems are notified following workplace procedures 2.3. Finished upholstered item is inspected against work requirement with unsatisfactory finish being redirected for reworking
3. Complete work	3.1. Finished work is package/stored/tagged and despatched to the next process following workplace procedures 3.2. Any required documentation is completed and processed following workplace procedures 3.3. Tools and equipment used are cleaned, maintained as required and stored in accordance with workplace procedures 3.4. Work area is cleaned with waste and scrap being removed/recycled in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements and estimate material requirements
- use pre-checking and inspection techniques to anticipate sewing problems, avoid re-working and wastage
- use the limited workplace technology related to the finishing of upholstered furniture

Required knowledge

- work requirements including workplace standards
- identification of techniques and procedures for the finishing processes
- fabric types, common faults and inspection procedures
- methods to be used with different fabric types
- design features of the upholstered items in relation to the finishing techniques to be used

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Apply safe handling practices for equipment, products and materials
- Identify materials used and any special sewing requirements for the materials to be sewn
- Interpret work order, copy samples and locate and apply relevant information
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum:
 - hand sew at least two different items of upholstered furniture using differing sewing techniques, such as cushion mouth and outback
 - apply two other finishing techniques to items of upholstered furniture, one concealed and one decorative
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate sewing equipment, hardware, fabrics, work order, workplace information including work procedures.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which together form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit context

- Workplace health and safety requirements may include OHS legislation, material safety management systems, hazardous and dangerous goods codes and safe operating procedures
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the finishing of upholstered furniture
- Work is carried out in accordance with legislative obligations, relevant health regulations, manual handling procedures and organisation insurance requirements

Finishing techniques

Finishing techniques may be:

- decorative techniques which include, but are not limited to:
 - braiding
 - gimping
 - close and open studding
 - single and double piping and banding
- concealed techniques which include, but are not limited to:
 - straight edge
 - shark's teeth
- hand sewing techniques, which may be used in both decorative and concealed finishing. These include, but are not limited to:
 - flange cord
 - cord and ruching
 - the closure of items such as cushions
 - external backs of upholstered furnishings

Tools and equipment may include:

- a range of needles and threads
- tack hammers
- hammers and hot melt glue gun

RANGE STATEMENT	
Materials to be used in finishing items may include but are not limited to:	<ul style="list-style-type: none"> • fabrics • leather • upholstery nails • gimping • metal trim • piping and vinyl
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles, • hair nets, • ear muffs/plugs, • gloves • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the setting and operation of machinery and use of tools and equipment • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP3009B Develop cutting plan and cut multiple layer upholstery fabric

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to develop cutting plans and cut fabrics for upholstered furniture.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Specifications, patterns and/or plans are read and interpreted to identify required fabrics, number and nature of items to be cut and required equipment</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.3. Fabrics, work method and sequence are determined</p> <p>1.4. Suitable work area is selected, prepared and cleaned of any contaminants</p> <p>1.5. Appropriate equipment and tools (including scissors and blades) are selected for the fabrics to be cut and checked for safe operation</p> <p>1.6. Fabric is selected and checked in terms of quantity, quality, contaminants, size, pattern and consistency in accordance with workplace procedures</p> <p>1.7. Scissors and any other cutting equipment are checked prior to use for appropriate sharpness, set operation and safe condition</p>
2. Develop cutting list and cutting plan	<p>2.1. Cutting requirements including bias or other instructions are noted</p> <p>2.2. Measurements for upholstered items are taken and listed</p> <p>2.3. Cutting list is developed using appropriate format, abbreviations and terminology for cut sizes, names and number of pieces in accordance with workplace procedures</p> <p>2.4. Cutting plan is developed in accordance with workplace procedures, noting if fabric is railroaded</p>
3. Prepare materials for cutting	<p>3.1. Fabrics are selected in accordance with work order and laid out and inspected for flaws and appropriate finish</p> <p>3.2. Nap/pile direction, direction of pattern, pattern repeat and finished side of the materials are identified</p> <p>3.3. Fabrics are squared up to the edges or guide markings on the cutting table</p> <p>3.4. Patterns are laid out following work procedures and instructions using registration points on the pattern and other instructions to match required fabric pattern</p>
4. Cut material	4.1. Measurements are confirmed and appropriate

ELEMENT	PERFORMANCE CRITERIA
	<p>adjustments to the positioning of fabric are made</p> <p>4.2. Tools and equipment are checked for operation</p> <p>4.3. Required cutting operations are completed to cut out fabrics following work instructions</p> <p>4.4. Cut fabric is inspected for quality and unsatisfactory items are processed in accordance with workplace instructions</p> <p>4.5. Fabrics are folded, wrapped using appropriate protective covers and care label information attached prior to despatch to next process following workplace procedures</p>
5. Complete work	<p>5.1. Unused materials are stored as required</p> <p>5.2. Workplace required documentation, including stock usage, is completed and processed following procedures</p> <p>5.3. Work area is cleaned and damaged tools and equipment tagged as required</p> <p>5.4. Waste is collected for recycling/reuse as required by workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, plans and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate area and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use workplace technology related to the development of cutting plans and cutting fabrics, including tools, equipment, materials and measuring devices

Required knowledge

- fabric types, common faults and inspection procedures
- design features of the finished furnishing items in relation to developing the cutting plan, laying out and cutting the fabrics
- work requirements including workplace standards

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Identify materials used and any special cutting requirements for those materials
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, measure, develop cutting plan, lay out and cut out at least five layers of fabric for an item of upholstered furniture
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate scissors and tools, fabrics, work order, workplace information including work procedures and/or equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- This unit covers work involving developing a cutting plan and cutting multiple layer upholstery fabrics by hand or automatic method
- A cutting plan is developed to ensure fabric is laid correctly to indicate run for each panel, the dimensions for each component part and to minimise fabric waste

Unit context

- Workplace health and safety requirements may include OHS legislation, material safety management systems, hazardous and dangerous goods codes and safe operating procedures
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the development of cutting plans and the cutting of material. This may be demonstrated either individually or in a team environment
- Work is carried out in accordance with statutory requirements, relevant health regulations, environmental legislation, manual handling procedures and organisation insurance requirements

Tools and equipment may include, but are not limited to:

- cutting table
- tape measures
- scissors
- cutting blades
- round knife cutter
- straight knife
- automatic cutting machines and cloth cutting machine

Materials to be cut may include but are not limited to:

- velvet
- vinyl and plain and patterned fabric

RANGE STATEMENT	
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles • hair nets • ear muffs/plugs • gloves • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Workplace procedures relating to the setting and operation of machinery • Workplace procedures relating to the development of cutting plans • Work instructions, including job sheets, patterns, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFUP3010B Cut, sew and fit skirts to upholstered furniture

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to measure, mark out, cut and sew skirts for items of upholstered furniture.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan work operations	1.1. Specifications concerning design, fabrics, accessories and finish for the skirts are confirmed with designer/customer/client, as required 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Fabrics, work method and sequence are determined 1.4. Suitable work area is selected, prepared and cleaned of any contaminants 1.5. Appropriate equipment and tools are selected and checked for safe operation 1.6. Fabric is selected and checked in terms of quantity, quality, contaminants, size, pattern and consistency
2. Measure and mark out pattern/template	2.1. Measurements are taken from furniture item to be fitted or from job sheet/specification 2.2. Pattern/template is developed from measurements 2.3. Fabric is laid out and pattern/template located to conform with pattern/nap/direction of the fabric and to minimise wastage 2.4. Any registration points on the pattern and other instructions to match required pattern components are marked 2.5. Fabric is marked in accordance with workplace procedures
3. Cut and sew skirts	3.1. Fabric is squared up to the edges or guide markings on the cutting table 3.2. Fabric is cut and work inspected to ensure accuracy/tolerance in accordance with workplace procedures 3.3. Sewing machine set up requirements and adjustments are identified and followed 3.4. Machine maintains required product quality and output 3.5. Finished skirts are checked for required quality and reprocessed if required
4. Complete work	4.1. Workplace documentation is completed in accordance with procedures 4.2. Waste and scrap are removed in accordance with workplace procedures 4.3. Machines and tools used are cleaned, inspected for

ELEMENT	PERFORMANCE CRITERIA
	<p>serviceability and stored in accordance with workplace procedures</p> <p>4.4. Equipment is maintained and work area is cleaned in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities, including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise component and material sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the workplace technology related to the fabrication of skirts for upholstered furniture

Required knowledge

- work requirements including workplace standards and inspection procedures
- workflow in relation to the fabrication of skirts
- fabric types and characteristics, common faults and inspection procedures
- design features of the finished furnishing items in relation to laying out the pattern and cutting the fabric

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Identify and select fabric, matching pattern/nap/direction
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, measure, mark out, cut and sew the following types of skirts, two of which are to be lined and one of which is to be fitted to a footstool or chair:
 - knife skirt
 - box skirt
 - mock box
 - inverted
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Tape measures, scissors, cutting table, fabric, sewing machines, work order/furniture to be fitted, workplace information including work procedures and/or equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which together form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment,

EVIDENCE GUIDE

materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope	<ul style="list-style-type: none"> This unit addresses the requirement to measure, mark out, cut and sew skirts for application to items of upholstered furniture Types of skirt include, but are not limited to: knife, box, mock box and inverted
Unit context	<ul style="list-style-type: none"> OHS requirements include legislation, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures Work requires individuals to demonstrate discretion, judgement and problem solving skills in the fabrication of skirts Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> measuring tape cutting table straight edges skewers scissors and sewing machines
Sewing machines may include:	<ul style="list-style-type: none"> flat bed walking foot and overlocker
Sewing machine set up and adjustments include:	<ul style="list-style-type: none"> threading machine and winding bobbin setting required tensions setting required machine settings lubricating and adjusting the machine and testing operation for work order requirements
Materials may include:	<ul style="list-style-type: none"> fabric calico chalk pattern/template material

RANGE STATEMENT	
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles • hair nets • ear muffs/plugs • gloves • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Workflow in relation to the fabrication of skirts • Workplace procedures relating to the setting and operation of machines • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units	

LMFUP3011B Cut, sew and fit or fill cushions

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to cut, sew and fit or fill loose and fitted cushions for upholstered furniture.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan work operations	<p>1.1. Specifications concerning design, fabrics, accessories and finish for the cushions are confirmed with designer/customer/client, as required</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.3. Fabrics, filling medium, work method and sequence are determined</p> <p>1.4. Suitable work area is selected, prepared and cleaned of any contaminants</p> <p>1.5. Appropriate equipment and tools are selected and checked for safe operation</p> <p>1.6. Material and filling medium is selected and checked in terms of quantity, quality, contaminants, size, pattern and consistency in accordance with workplace procedures</p>
2. Cut and sew cushion covers	<p>2.1. Material is laid out on cutting table and nap/pile, direction of pattern, pattern repeat and finished side of fabric are identified</p> <p>2.2. Patterns are laid out using registration points on the pattern and other instructions to match required fabric pattern, ensuring maximum use of the fabric</p> <p>2.3. Fabric is cut and work inspected to ensure accuracy/tolerance in accordance with workplace procedures</p> <p>2.4. Sewing machine set up requirements and adjustments are identified and followed</p> <p>2.5. Machine maintains required product quality and output</p> <p>2.6. Finished cushion covers are checked for required quality and reprocessed if required</p>
3. Fit and fill cushions	<p>3.1. Cushion covers are checked for fit and amount of filling determined for each application</p> <p>3.2. Cushions are filled to the appropriate size using appropriate methods</p> <p>3.3. Final sewing of cushion is performed in accordance with workplace procedures</p> <p>3.4. Completed cushions are inspected for quality and fit with those not conforming to the requirement being reprocessed or disposed of in conformance with</p>

ELEMENT	PERFORMANCE CRITERIA
	workplace practices
4. Complete work	4.1. Workplace documentation is completed in accordance with procedures 4.2. Waste and scrap are collected for disposal/recycling in accordance with workplace procedures 4.3. Machines and tools used are cleaned, inspected for serviceability and stored in accordance with workplace procedures 4.4. Equipment is maintained and work area is cleaned in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise component and material sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the workplace technology related to the cutting, sewing and fitting or filling of cushions

Required knowledge

- work requirements including workplace standards and inspection procedures
- workflow in relation to the cutting, sewing and fitting or filling of cushions
- fabric types and characteristics, common faults and inspection procedures
- design features of the finished furnishing items in relation to laying out the pattern and cutting the fabric

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Identify and select fabric, matching pattern/nap/pile/direction
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum, cut, sew and fit or fill the following cushions:
 - piped border cushion
 - wrap around cushion
 - T-cushion
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Cutting table, material, filling medium, sewing machines, cushion filling machine, work order/furniture to be fitted, workplace information including work procedures and/or equipment instructions.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which together form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Unit scope	This unit addresses the requirement to cut, sew and fit or fill loose or fitted cushions for upholstered furniture
Unit context	<ul style="list-style-type: none"> • OHS requirements include legislation, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the cutting, sewing and fitting or filling of cushions • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
Tools and equipment may include, but are not limited to:	<ul style="list-style-type: none"> • cutting table • cutting machines • scissors • sewing machines and cushion filling machines
Sewing machines may include:	<ul style="list-style-type: none"> • flat bed • walking foot and overlocker
Sewing machine set up and adjustments include:	<ul style="list-style-type: none"> • threading machine and winding bobbin • setting required tensions • setting required machine settings • lubricating and adjusting the machine • and testing operation for work order requirements
Materials may include:	<ul style="list-style-type: none"> • fabric and filling material
Filling material may include, but is not limited to:	<ul style="list-style-type: none"> • foam • dacron • flock

RANGE STATEMENT	
	<ul style="list-style-type: none"> • crumbed foam • springs • wadding fibre • linters and feathers/down
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles • hair nets • ear muffs/plugs • gloves • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Workflow in relation to the cutting, sewing, and fitting or filling of cushions • Workplace procedures relating to the setting and operation of machines • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP3012B Apply marine sewing and installation techniques

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to use marine sewing techniques in the completion of upholstery products/items.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Job requirements are identified from work instructions 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Machines, attachments, materials, work method and sequence are determined 1.4. Equipment, including any supplementary equipment, is identified and checked for safe operation, components and controls 1.5. Materials are identified and inspected and problems, including any materials or part constructed products which do not meet the job order requirements, are identified and reported in accordance with workplace procedures 1.6. Work pieces are laid out in sequence in accordance with specifications and workplace procedures
2. Conduct sewing operation	2.1. Sewing machine (including attachments as required), set up requirements and adjustments are observed in accordance with workplace procedures 2.2. Appropriate thread type and size is fitted to machine 2.3. Machine is operated to maintain required product quality and outputs 2.4. Reinforcing/protective measures, fittings/attachments and fixing devices are attached in accordance with workplace procedures 2.5. Finished products are inspected for quality with unacceptable items being reprocessed in accordance with workplace instructions
3. Complete work	3.1. Unused materials are stored as required 3.2. Workplace required documentation, including stock usage, is completed and processed following workplace procedures 3.3. Work area is cleaned and damaged tools and equipment tagged as required 3.4. Waste is collected and bundled for recycling/reuse as required by workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise component and material sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the workplace technology related to the application of marine sewing and application techniques

Required knowledge

- procedure for reporting damaged or imperfect products or interruption to workflow
- workflow requirements for sewing process
- operation of work systems and sewing equipment
- characteristics of materials used and application and requirements of the finished products
- causes of faults and repair methods
- identification of equipment, processes and procedures
- quality systems and standards
- workplace procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information
- Identify and select materials used and any special handling requirements for those materials
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum:
 - prepare and install a minimum of 3 square metres of cover to at least 3 vertical or horizontal surfaces
 - sew at least three covers
 - sew appropriate fasteners and attachments to covers sewn
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

Appropriate sewing machine, work orders, operating procedures, materials, fittings and threads.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope	<ul style="list-style-type: none"> • This unit addresses the sewing techniques used to sew materials used in marine application and to fit the required attachments and fixing devices • Fittings/attachments and fixing devices include: clips, press studs, buckles, eyelets, shackles, zips, reinforcing patches, straps • Suitable installation methods are used with consideration to suitability or products used in the process
Unit context	<ul style="list-style-type: none"> • Workplace health and safety includes OHS legislation, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures • Work requires individuals to demonstrate discretion, judgement and problem solving skills in the application of marine sewing techniques • Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements
Job requirements may include:	<ul style="list-style-type: none"> • required materials • threads • additional work features • shape and special requirements for the item • any required workplace documentation to be competed
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • overlocker • flat bed • twin needle and walking foot
Tools and equipment may include:	<ul style="list-style-type: none"> • measuring tape • scissors

RANGE STATEMENT	
	<ul style="list-style-type: none"> • cutting blades • knives and thread
Materials to be sewn may include but are not limited to:	<ul style="list-style-type: none"> • canvas • sail materials • leather • foam-backed vinyl and upholstery fabrics
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles • hair nets • ear muffs/plugs • gloves • footwear • protective clothing and breathing apparatus
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machines • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP3013B Cut and sew canvas and acrylics

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to cut and sew canvas and acrylics for application to fixtures and fittings requiring upholstery.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	<p>1.1. Specifications, patterns and/or plans are read and interpreted to identify required material, number and nature of items to be cut and the equipment to be used</p> <p>1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work</p> <p>1.3. Machines, attachments, tools (including scissors and blades), materials, work method and sequence are determined</p> <p>1.4. Suitable work area is selected, prepared and cleaned of any contaminants</p> <p>1.5. Equipment, including any supplementary equipment, is identified and checked for safe operation, components and controls</p> <p>1.6. Scissors and any other cutting equipment, such as a hot knife, are selected for the material to be cut and checked for appropriate sharpness, operation and safe condition</p> <p>1.7. Materials to be cut and sewn are identified and inspected and problems, including any materials which do not meet the job order requirements, are identified and reported in accordance with workplace procedures</p>
2. Develop cutting plan	<p>2.1. Cutting requirements are identified</p> <p>2.2. Measurements for item are confirmed, noting locations of high wear/chafing, fittings/attachments and fixing devices</p> <p>2.3. If appropriate, cutting list is developed using appropriate format, abbreviations and terminology for cut sizes and number of pieces in accordance with workplace procedures</p> <p>2.4. Cutting plan is developed in accordance with workplace procedures</p>
3. Prepare materials for cutting	<p>3.1. Material is selected in accordance with work order and laid out and inspected for flaws</p> <p>3.2. Finished side of the materials is identified and positioned on cutting table for marking/pattern lay out</p> <p>3.3. Material is marked out/patterns are laid out following work procedures and instructions</p>
4. Cut material	<p>4.1. Measurements are confirmed and appropriate</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>adjustments to the positioning of fabric are made</p> <p>4.2. Tools and equipment are checked for operation</p> <p>4.3. Required cutting operations are completed to cut material following work instructions</p> <p>4.4. Cut material is inspected for quality and unsatisfactory items are processed in accordance with workplace instructions</p> <p>4.5. Cut materials are labelled and despatched to next process in accordance with workplace procedures</p>
5. Conduct sewing operation	<p>5.1. Items to be sewn are inspected for quality and dimensions</p> <p>5.2. Sewing machine (including attachments as required) is set up in accordance with workplace instructions</p> <p>5.3. Machine is operated in accordance with manufacturers' instructions and workplace procedures to maintain required product quality and output</p> <p>5.4. Reinforcing/protective measures, fittings/attachments and fixing devices are attached in accordance with workplace procedures</p> <p>5.5. Finished items are inspected for quality with unacceptable items being reprocessed in accordance with workplace procedures</p>
6. Complete work	<p>6.1. Workplace documentation, including stock usage, is completed and processed following workplace procedures</p> <p>6.2. Equipment maintenance and work area clean up are completed following workplace procedures</p> <p>6.3. Waste is collected and bundled for recycling/reuse as required by workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any backtracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate work requirements, optimise component and material sizes for economical cutting and assemble required materials
- use pre-checking and inspection techniques to plan work, avoiding re-working and wastage
- use the workplace technology related to the measuring, cutting and sewing of canvas and acrylics

Required knowledge

- procedure for reporting damaged or imperfect products or interruption to workflow
- workflow requirements for cutting and sewing process
- operation of work systems and cutting and sewing equipment
- characteristics of the materials used and the application of the finished products
- causes of faults and repair methods
- identification of equipment, processes and procedures
- quality systems and standards
- workplace procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Critical aspects of evidence</p>	<ul style="list-style-type: none"> • Interpret work order and locate and apply relevant information • Identify and select materials used and any special handling requirements for those materials • Follow work instructions, operating procedures and inspection practices to: <ul style="list-style-type: none"> • minimise the risk of injury to self and others • prevent damage to goods, equipment and products • maintain required production output and product quality • As a minimum,: <ul style="list-style-type: none"> • measure, cut and sew one canvas product and one acrylic product • apply binding as an edge finish to a curve and three corners, 2 metres in length • Work effectively with others • Modify activities to cater for variations in workplace contexts and environment
<p>Resource implications</p>	<p>Appropriate measuring tapes, cutting table, scissors, blades and cutting machines, sewing machine, work orders, operating procedures, materials and threads.</p>
<p>Method of assessment</p>	<p>Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.</p> <p>Assessment should be by direct observation of tasks and questioning on underpinning knowledge.</p> <p>Assessment should be conducted over time and may be in conjunction with assessment of other units of competency which form a part of the job role.</p>
<p>Context of assessment</p>	<p>Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Unit scope

- This unit addresses the measuring, cutting and sewing of canvas and acrylic materials for upholstery application and for other uses such as automotive and marine application
- Materials include but are not limited to:
 - cloths
 - canvases
 - acrylics
 - carpets
 - foam-backed fusion bonded and needle punched materials
- Fittings/attachments and fixing devices include:
 - clips
 - press studs
 - buckles
 - eyelets
 - shackles
 - zips
 - reinforcing patches
 - straps

Unit context

- Workplace health and safety includes OHS legislation, material safety management systems, hazardous substances and dangerous goods codes and safe operating procedures
- Work requires individuals to demonstrate discretion, judgement and problem solving skills in the set up and operation of machines
- Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling procedures and organisation insurance requirements

RANGE STATEMENT	
Machines may include, but are not limited to:	<ul style="list-style-type: none"> • overlocker • flat bed • walking foot
Materials to be machined may include but are not limited to:	<ul style="list-style-type: none"> • fabrics • cotton canvas • acrylics and thread
Personal protective equipment	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise practices and procedures. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles • hair nets • ear muffs/plugs • gloves • footwear and protective clothing
Information and procedures	<ul style="list-style-type: none"> • Machine manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machine s • Work instructions, including job sheets, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

LMFUP3014B Set up, operate and maintain CNC cutting machines

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the competency to set up and operate CNC machines to cut material for upholstering furniture.
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Application of the Unit

Application of the unit	
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for work	1.1. Work instructions are used to determine job requirements including design, quality, materials, equipment and quantities 1.2. Workplace health and safety requirements, including personal protection needs, are observed throughout the work 1.3. Determine appropriate CNC cutting program and settings 1.4. Material for cutting is selected and inspected for appropriate quality 1.5. Machines, cutting tools and jigs are checked for safe and effective operation 1.6. Procedures are determined for minimising waste material and for maximising energy efficiency while completing the job 1.7. Safety equipment, including emergency stops, gauges, guards and controls are checked
2. Set up machines	2.1. CNC cutting program is set to job requirements 2.2. Machine settings and adjustments are made in accordance with job requirements and machine and tool manufacturer instructions 2.3. Trial runs are conducted to check machine operation and quality of finished work 2.4. Final adjustments are made to CNC programs and equipment according to workplace procedures
3. Operate CNC cutting machine	3.1. Machines are operated and monitored to ensure product quality and output 3.2. Waste quantities are checked and minimised 3.3. Problems with the required work, including machine operation/production, are identified and reported in accordance with workplace procedures 3.4. Any authorised changes in working procedures are followed 3.5. Daily routine lubrication and adjustments for the equipment are completed
4. Complete work and maintain equipment	4.1. Items that do not meet quality requirements are repaired, recycled or discarded according to workplace procedures 4.2. Material that can be reused is collected and stored 4.3. Waste and scrap are removed following workplace

ELEMENT	PERFORMANCE CRITERIA
	<p>procedures</p> <p>4.4. Equipment and work area are cleaned and inspected for serviceable condition in accordance with workplace procedures</p> <p>4.5. Unserviceable equipment is tagged and faults identified in accordance with workplace procedures</p> <p>4.6. Operator maintenance is performed on equipment and tooling is maintained in accordance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- collect, organise and understand information related to work orders, basic plans, and safety procedures
- communicate ideas and information to enable confirmation of work requirements and specifications, coordination of work with work supervisor, other workers and customers, and the reporting of work outcomes and problems
- plan and organise activities including the preparation and layout of the work area and the obtaining of equipment and materials to avoid any back tracking, workflow interruptions or wastage
- work with others and in a team by recognising dependencies and using cooperative approaches to optimise workflow and productivity
- use mathematical ideas and techniques to correctly complete measurements, calculate quantities and estimate material requirements
- use pre-checking and inspection techniques to anticipate cutting problems, avoid re-working and wastage
- use the workplace technology related to the operation of CNC cutting machines including programs, development of computer applications within the industry and precision measuring devices

Required knowledge

- workflow in relation to the operation of CNC machines
- identification of machines, processes and procedures, including maintenance requirements
- procedures for reporting materials, product or equipment faults
- quality requirements of components produced
- characteristics of materials used and uses of products produced
- workplace safety system requirements related to the operation of CNC machines

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence

- Interpret work order and locate and apply relevant information to set up, operate, adjust, monitor and maintain equipment used to produce components for upholstered furniture
- Apply safe handling requirements for equipment, products and materials, including use of personal protective equipment, safety and environmental protection equipment
- Identify and operate CNC cutting machines including the use of safety cut outs and guards
- Follow work instructions, operating procedures and inspection practices to:
 - minimise the risk of injury to self and others
 - prevent damage to goods, equipment and products
 - maintain required production output and product quality
- As a minimum:
 - set up and program machine for the cutting task
 - load fabric
 - operate machine to cut components for a chair
- Work effectively with others
- Modify activities to cater for variations in workplace contexts and environment

Resource implications

CNC cutting machines, standard operating procedures, unprocessed materials and appropriate work area.

Method of assessment

Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts.

Assessment should be by direct observation of tasks and questioning on underpinning knowledge.

Assessment should be conducted over time and generally be in conjunction with assessment of other units of competency which together form a part of the job role.

Context of assessment

Assessment may occur on the job or in a workplace simulated facility with relevant CNC equipment,

EVIDENCE GUIDE

materials, work instructions and deadlines.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Unit context</p>	<ul style="list-style-type: none"> • This unit covers work involved in the set up, operation, adjustment, monitoring and maintenance of computer numerically controlled (CNC) machines used in the cutting of upholstery materials • Workplace health and safety requirements may include OHS legislation, standards, material safety management systems and safe operating procedures • Work requires individuals to demonstrate some discretion, judgement and problem solving skills in the set up and operation of machines • Work is carried out in accordance with legislative obligations, environment legislation, manual handling procedures and relevant regulations and organisation insurance requirements
<p>CNC machines</p>	<ul style="list-style-type: none"> • CNC machines used in the cutting of upholstery materials include, but are not limited to: • fabric cutting machines • leather cutting machines
<p>Upholstery materials may include but are not limited to:</p>	<ul style="list-style-type: none"> • fabrics and leather
<p>Personal protective equipment</p>	<p>Personal protective equipment is to include that prescribed under legislation, regulations and enterprise policies and practices. It may include:</p> <ul style="list-style-type: none"> • safety glasses/goggles • hair nets • ear muffs/plugs • gloves • footwear • protective clothing

RANGE STATEMENT	
Information and procedures	<ul style="list-style-type: none"> • Manufacturer specifications and operational procedures • Workplace procedures relating to the setting and operation of machines • Work instructions, including job sheets, cutting lists, programs, plans, drawings and designs • Workplace procedures relating to reporting and communication

Unit Sector(s)

Unit sector	Upholstery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

BSBADM311A Maintain business resources

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to determine, administer and maintain resources and equipment to complete a variety of tasks.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who are skilled operators and apply a broad range of competencies in various work contexts. They may exercise discretion and judgement using appropriate theoretical knowledge of business resources and their maintenance to provide technical advice and support to a team.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Advise on resource requirements	1.1. Calculate estimates of future and present business resource needs in accordance with organisational requirements 1.2. Ensure advice is clear, concise and relevant to achievement of organisational requirements 1.3. Provide information on the most economical and effective choice of equipment, materials and suppliers 1.4. Identify resource shortages and possible impact on operations
2. Monitor resource usage and maintenance	2.1. Ensure resource handling is in accordance with established organisational requirements including occupational health and safety requirements 2.2. Use business technology to monitor and identify the effective use of resources 2.3. Use consultation with individuals and teams to facilitate effective decision making on the appropriate allocation of resources 2.4. Identify and adhere to relevant policies regarding resource use in the performance of operational tasks 2.5. Routinely monitor and compare resource usage with estimated requirements in budget plans
3. Acquire resources	3.1. Ensure acquisition and storage of resources is in accordance with organisational requirements, is cost effective and consistent with organisational timelines 3.2. Acquire resources within available time lines to meet identified requirements 3.3. Review resource acquisition processes to identify improvements in future resource acquisitions

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to read and understand organisation's policies and procedures; to write simple instructions for a particular routine task
- evaluation skills to diagnose faults and to monitor resource usage
- problem-solving skills to determine appropriate fault repair actions
- numeracy skills to calculate resource expenditure
- technology skills to select and use technology appropriate to a task.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - occupational health and safety (OHS)
- organisational resource acquisition policies, plans and procedures
- functions of a range of business equipment
- organisational procedures for record keeping/filing systems, security and safe recording practices.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> collecting and recording data on resource use observing resource use over defined and operational timeframes carrying out routine maintenance knowledge of organisational resource acquisition policies, plans and procedures.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to an actual workplace or simulated environment access to office equipment and resources.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate review of documentation estimating future and present business resource needs analysis of responses to case studies and scenarios demonstration of techniques oral or written questioning to assess knowledge of equipment maintenance procedures review of information provided on the most economical and effective choice of equipment, materials and suppliers evaluation of documentation reviewing resource acquisition processes.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> other general administration units.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Business resources</i> may include:</p>	<ul style="list-style-type: none"> • equipment • facilities • human resources • raw materials • software • stock and supplies
<p><i>Organisational requirements</i> may include:</p>	<ul style="list-style-type: none"> • access and equity principles and practice • business and performance plans • defined resource parameters • ethical standards • goals, objectives, plans, systems and processes • legal and organisational policies, guidelines and requirements • management and accountability channels • manufacturer's and operational specifications • OHS policies, procedures and programs • quality and continuous improvement processes and standards • quality assurance and/or procedures manuals • security and confidentiality requirements
<p><i>Occupational health and safety requirements</i> may include:</p>	<ul style="list-style-type: none"> • decision making delegations • equipment use • first aid kit • medical attention • reporting requirements • site access
<p><i>Business technology</i> may include:</p>	<ul style="list-style-type: none"> • computer applications • computers • modems • personal schedules • photocopiers
<p><i>Policies regarding resource use</i></p>	<ul style="list-style-type: none"> • budgeting limits

RANGE STATEMENT	
may include:	<ul style="list-style-type: none"> • ordering procedures • purchasing authorities • recruitment and personnel • time management • transport/travel policies
<i>Resource acquisition processes</i> may include:	<ul style="list-style-type: none"> • contracted supplier ordering • internal approvals • non-tendered processes • periodic forecasts • tendered processes

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Administration - General Administration
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Co-requisite units

Co-requisite units	

BSBADV512A Develop an advertising strategy and brief

Modification History

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to develop an advertising brief, advertising strategy and creative brief which reflects advertiser needs and preferences.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

This unit describes the performance outcomes, skills and knowledge required to develop an advertising brief, advertising strategy and creative brief which reflects advertiser needs and preferences.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

This unit applies to individuals working in a supervisory or management advertising role within an advertising team or media organisation.

This unit applies to individuals working in a supervisory or management advertising role within an advertising team or media organisation.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Employability Skills Information

This unit contains employability skills.

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Determine advertiser requirements	1.1 Confirm the advertising purpose and objectives with the advertiser
	1.2 Obtain comprehensive client and product information
	1.3 Review the outcomes of previous advertising with the client
	1.4 Confirm budget allocation with the client
2 Develop an advertising brief	2.1 Ensure the brief contains a client profile, purpose statement and objectives that reflect advertiser needs
	2.2 State advertising objectives in measurable terms and provide specific guidelines on what is to be accomplished by the advertising
	2.3 Define key characteristics, competitive factors and the market situation facing the product or service in the advertising brief
	2.4 Include a summary of information on the target audience , and legal and ethical constraints in the advertising brief
	2.5 Ensure the brief contains a budget allocation and schedule of activities which comply with the

- advertiser's requirements
- 3 Develop an advertising strategy
 - 3.1 Establish **key consumer insight**
 - 3.2 Develop **advertising objectives**
 - 3.3 Describe audience to be targeted according to **demographic, psychographic and behaviouristic characteristics**
 - 3.4 Develop a positioning statement
 - 3.5 Create a unique selling proposition and support statement
 - 3.6 Develop **desired consumer response**
 - 3.7 Establish brand personality
 - 3.8 Suggest media leveraging opportunities
 - 3.9 Confirm **advertiser's mandatory requirements**
 - 4 Develop a creative brief
 - 4.1 Identify **advertising content** using consumer language in the advertising brief
 - 4.2 Identify a **pitch or appeal** for the product in the advertising brief that meets the advertiser's requirements
 - 4.3 Identify **supporting information** required for consumer understanding of the product or service in the advertising brief
 - 4.4 Ensure a budget for creative work that is consistent with the overall advertising budget is contained in the advertising brief
 - 4.5 Incorporate a deadline for creative work that is consistent with the overall advertising schedule in the advertising brief

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

communication skills to question, clarify and report when creating an advertising brief

literacy skills to write in a range of styles for different audiences and to interpret legal requirements, company policies and procedures

numeracy skills to develop budgets

organisational and time management skills to plan projects, meet deadlines and allocate tasks

technology skills to use a wide range of office equipment and software to create an advertising brief.

Required knowledge

industry, services/products and organisation

legal and ethical requirements relating to the advertising industry

organisational products or services

principles and purposes of advertising

principles of consumer behaviour and influences on buyer behaviour

range of available advertising approaches for different markets

identification and overview knowledge of key provisions of relevant legislation from all levels of government that affects business operations, codes of practice and national standards, such as:

anti-discrimination legislation

consumer protection laws

copyright legislation

ethical principles

fair trading laws

privacy laws

Trades Practices Act

requirements for advertising timelines, budget, central idea, resources as specified in the advertising brief.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:
development of at least one advertising brief which meets the advertiser's requirements, needs and preferences.

Context of and specific resources for assessment

Assessment must ensure:
access to an actual workplace or simulated environment
access to office equipment documentation and resources.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- analysis of responses to case studies and scenarios
- assessment of written reports/examples of advertising briefs
- demonstration of techniques used to create advertising briefs
- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- oral or written questioning to assess knowledge of principles and purposes of advertising
- review of creative brief and advertising strategy.

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

other advertising units.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Advertising purpose may include:	communicating a message to a particular audience differentiating features or benefits promoting image providing information recruiting staff retaining customers stimulating demand for a product or service
Client and product information may include:	distribution channels existing customers and target market packaging design past advertising for the product price, if any problems and opportunities facing the product product name and characteristics the company, its business policies and practices the company's promotional ethos the competition
Advertising objectives may include:	the launch or re-launch of a product or service to improve sales performance and/or profit to maintain or improve market share to maintain or increase awareness of a product or service to test a product or service
Information on the target audience may include:	attitudes cultural factors

demographics
existing product usage
lifestyle
social factors
values

Legal and ethical constraints may include: codes of practice such as those issued by:
Advertising Federation of Australia
Australian Communications and Media Authority
Australian Competition and Consumer Commission
Australian Performing Right Association
Commercial Radio Australia
Free TV Australia

cultural expectations and influences
ethical principles
legislation
policies and guidelines
regulations
social responsibilities such as protection of children, environmental issues
societal expectations

Key consumer insight may include: opportunities for extension
opportunities for new use of product
problems within product category

Advertising objectives may include: to inform
to persuade
to remind

Demographic characteristics may include: age
education
gender
income

marital status
number of children
nationality
occupation

Psychographic characteristics may include: activities
attitudes
interests
lifestyle
opinions
values

Behaviouristic characteristics may include: benefits sought by buyer
loyalty status of buyer
readiness stage of buyer
user status of buyer

Desired consumer response may include: behavioural outcomes
emotions and feelings
rational thought

Advertiser's mandatory requirements may include: previous tag lines
specific media placements
specified personality
specified spokesperson

Advertising content may include: information to be communicated to the audience such as:
brand or image factors
colour
competitive advantages
features of the product/service
price
where the product/service may be obtained

Pitch or appeal may include: the key benefits promised to the audience by the advertiser, which may be:
emotional

need-arousing
need-satisfying
negative
positive
rational

Supporting information may include:

a requirement to specify the target audience
evidence to support the claimed benefit
purchasing information
reassurances for existing users

Unit Sector(s)

empty
empt

Competency field

Business Development - Advertising
Business Development - Advertising

BSBCCO304B Provide sales solutions to customers

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to process sales inquiries requiring complex solutions and follow up to ensure customer satisfaction.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit is applied in any customer contact environment (either inbound or outbound) where sales are an element of the role. Sales may include up sell or cross sell activities, new sales or retention activities such as re contracting or applying loyalty programs.</p> <p>Competence in this unit requires effective customer service and sales skills, and the provision of the required levels of sales support for customers. It may involve performing credit checks and using systems and technology at varying levels.</p> <p>This work is undertaken with some supervision and guidance.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify customer needs	1.1. Question customers in detail and listen actively to determine product/service requirements 1.2. Verify and agree customer needs with the customer 1.3. Access existing customer records 1.4. Offer technical/specialist advice to customer where such advice is considered beneficial to the closing of the sale and customer understanding and decision making 1.5. Identify customer's financial limitations 1.6. Discuss estimates and quotes with specialist staff if necessary, prior to submission to customer 1.7. Prepare, present and discuss estimates/quotes with customer, as the role permits 1.8. Explain fully, benefits of the various options 1.9. Explain fully, pricing structures to the customer 1.10. Give customers the opportunity to question options/quotes provided 1.11. Promote advantages of dealing with the enterprise 1.12. Manage customer objections effectively by promotion of specific benefits
2. Close sales	2.1. Agree on product/service to be purchased with the customer 2.2. Clearly establish customer's preferred purchase/payment arrangements 2.3. Accurately finalise documentation relating to sale and forward to customer for agreement and signature 2.4. Negotiate and arrange payment method with customer 2.5. Conduct appropriate credit checks 2.6. Clearly record delivery/installation arrangements as agreed with customer 2.7. Comply with relevant legislation, codes, regulations and standards during the contact and sale
3. Input sales records	3.1. Fully record details of sale 3.2. Amend existing customer records where appropriate 3.3. Initiate invoices in accordance with enterprise policy 3.4. Organise delivery/installation in accordance with enterprise policy

ELEMENT	PERFORMANCE CRITERIA
4. Provide sales support where required	4.1. Verify customer satisfaction after delivery/installation 4.2. Identify additional action to satisfy customer needs 4.3. Initiate action in an efficient and timely manner

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to effectively communicate with internal and external customers
- communication skills to relate to people from diverse backgrounds and people with diverse abilities
- customer service and sales skills to effectively and efficiently operate within sales environment
- literacy skills to clearly articulate information and advice
- negotiating skills to successfully work through the sales process and difficult contacts or situations
- numeracy skills to accurately analyse and validate data
- organisational skills to manage own tasks within timeframes
- problem-solving skills to apply a range of problem-solving strategies
- self-management skills to consistently evaluate and monitor own performance and to have confidence in own ideas and vision.

Required knowledge

- enterprise pricing policies
- enterprise protocols associated with customer service and sales
- estimate/quote procedures
- marketing principles and practice
- sales principles
- statutory, regulatory and legislative requirements.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • Clear and precise understanding of customer needs • Matching of product/service to customer need • Prices relating to product/service offered are clearly explained and understood by the customer • Application of appropriate credit check • Arrangement of customer payment • Agreement with customer as to payment and delivery arrangements • Accurate recording of sales, payment and delivery arrangements
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to relevant standards, guidelines and/or legislation • access to workplace information and data • access to relevant resources • access to work environment or simulated customer contact centre to observe interaction with customers
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • direct observation of interaction with customers • review record of sale and customer satisfaction • review agreed payment methods and credit checks • oral and/or written questioning to assess knowledge of systems and organisational requirements (security and operational).

EVIDENCE GUIDE

Guidance information for assessment

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- BSBCCO301A Use multiple information systems
- BSBCUS301A Deliver and monitor a service to customers

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Products/service requirements</i> may include:</p>	<ul style="list-style-type: none"> different products/services which will meet the customer needs, product model, pricing differentials, product/service types, product/service mixes
<p><i>Technical/specialist advice</i> would:</p>	<ul style="list-style-type: none"> normally be provided by product/service specialist engineer/provisioning/marketing staff
<p><i>Sale</i> may include:</p>	<ul style="list-style-type: none"> product/service, purchase/provision, variation to existing product/service, upgrade of current product/service, amendments to previous sale arrangements
<p><i>Purchase/payment arrangements</i> may include:</p>	<ul style="list-style-type: none"> credit card, cheque, money order, cash, payment on delivery, direct debit
<p><i>Credit checks</i> may be:</p>	<ul style="list-style-type: none"> automated or undertaken by sales person or by specialist staff within the enterprise
<p><i>Relevant legislation, codes, regulations and standards may include:</i></p>	<ul style="list-style-type: none"> Privacy Act EEO and Anti Discrimination Legislation Telecommunication Act Trade Practices Act Consumer Credit Code

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Stakeholder Relations - Contact Centre Operations
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Co-requisite units

Co-requisite units		

BSBCMM301A Process customer complaints

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to handle formal and informal negative feedback and complaints from customers.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who are skilled operators and apply a broad range of competencies in various customer service contexts. They may exercise discretion and judgement using appropriate knowledge of products, customer service systems and organisational policies to provide technical advice and support to a team.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Respond to complaints	1.1. Process <i>customer complaints</i> using <i>effective communication</i> in accordance with organisational procedures established under organisational policies, legislation or codes of practice 1.2. Obtain, <i>document</i> and review necessary reports relating to customer complaints 1.3. Make decisions about customer complaints, taking into account applicable legislation, organisational policies and codes 1.4. Negotiate resolution of the complaint and obtain agreement where possible 1.5. Maintain a register of complaints/disputes 1.6. Inform customer of the outcome of the investigation
2. Refer complaints	2.1. Identify complaints that require referral to other personnel or external bodies 2.2. Make <i>referrals</i> to appropriate personnel for follow-up in accordance with individual level of responsibility 2.3. Forward all documents and investigation reports 2.4. Follow-up appropriate personnel to gain prompt decisions
3. Exercise judgement to resolve customer service issues	3.1. Identify implications of issues for customer and organisation 3.2. Analyse, explain and negotiate appropriate options for resolution with customer 3.3. Propose viable options in accordance with appropriate legislative requirements and enterprise policies 3.4. Ensure matters for which a solution cannot be negotiated are referred to appropriate personnel

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to identify trends and positions of products and services
- communication skills to interpret customer complaints, and to monitor and advise on customer service strategies and resolutions
- culturally appropriate communication skills to relate to people from diverse backgrounds and people with diverse abilities
- literacy skills to read and understand a variety of texts; to prepare general information and papers according to target audience; and to edit and proofread texts to ensure clarity of meaning and accuracy of grammar and punctuation
- problem-solving skills to deal with customer enquiries or complaints, to apply organisational procedures to a range of situations and to exercise judgement in this application.

Required knowledge

- key provisions of relevant legislation from all forms of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - occupational health and safety (OHS)
- importance of good communication skills and the individual's role in processing customer complaints
- organisational procedures and standards for processing complaints and recommending appropriate action.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • applying judgement in the application of industry and/or organisational procedures • working with customer complaints • knowledge of organisational procedures and standards for processing complaints.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of customer complaints • examples of documents relating to customer complaints policies and procedures.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • analysis of responses to case studies and scenarios • demonstration of techniques • observation of presentations • oral or written questioning to assess knowledge of individual's role in processing customer complaints • review of documentation outlining necessary reports relating to customer complaints • review of complaints/disputes register.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • customer service units • other general administration units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Customers</i> may include:	<ul style="list-style-type: none"> • customers with routine or specific requests • internal or external customers • people from a range of social, cultural or ethnic backgrounds • people who may be unwell, drug affected or emotionally distressed • people with varying physical and mental abilities • regular and new customers
<i>Complaints</i> may include:	<ul style="list-style-type: none"> • different types of severity, formality and sources • scenarios where external bodies such as police are required • straightforward customer dissatisfaction • level of documentation required
<i>Effective communication</i> may include:	<ul style="list-style-type: none"> • giving customers full attention • maintaining eye contact (for face-to-face interactions), except where eye contact may be culturally inappropriate • speaking clearly and concisely • using appropriate language and tone of voice • using clear written information/communication • using non-verbal communication e.g. body language, personal presentation (for face-to-face interactions)
<i>Documenting</i> reports relating to customer complaints may include:	<ul style="list-style-type: none"> • completed forms and written reports • using audio-visual tapes • using computer-based systems
<i>Referrals</i> may include:	<ul style="list-style-type: none"> • external bodies e.g. Ombudsman, Independent Commission Against Corruption (ICAC), police • relevant superiors in the organisational hierarchy

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Communication - Interpersonal Communication
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Co-requisite units

Co-requisite units		

BSBCRT401A Articulate, present and debate ideas

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to articulate, present and debate ideas.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who need to present and debate ideas in a work or broader life context.</p> <p>While the unit shares some similarities with units such as BSBCMM401A Make a presentation or BSBRES401A Analyse and present research information, the focus is quite different.</p> <p>This unit focuses on the creative ways in which ideas can be presented to provoke response, reaction and critical debate. Risk taking, storytelling and participation in critical debate are key features of the unit. Ideas might be quite complex in nature and relate to new products, services, creative works or new ways of doing things.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse ideas for communication to others	1.1. Distil key themes, messages and positions to aid in clarity of thought and presentation 1.2. Reflect on different ways of communicating ideas for different purposes and to different people 1.3. Identify the enabling skills and attributes of individuals who can effectively participate in discussions about ideas
2. Provoke response and reaction	2.1. Explore and use different techniques to engage, fascinate and involve others in the process of communication and exchange 2.2. Explore the ways that storytelling can be used to communicate ideas 2.3. Create innovative approaches to different communication challenges 2.4. Be prepared to take risks in the way ideas are presented 2.5. Identify specific ways to provoke and encourage response in particular individuals or groups
3. Debate and discuss ideas	3.1. Present and argue substantiated positions on ideas 3.2. Be open to critical analysis of own ideas and to the ideas of others 3.3. Identify and participate in conversations that challenge and explore different concepts and approaches, and generate new ideas 3.4. Respond to questions about ideas with confidence and relevant information 3.5. Reflect on and appraise the views of others, and use to refine ideas and to embrace new ideas

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to present ideas in ways that engage and provoke response, and to debate and discuss potentially complex concepts
- creative thinking skills to develop responses and new ideas in response to feedback
- learning and self-management skills to actively seek feedback and to learn from others
- literacy skills to develop and interpret information dealing with complex ideas.

Required knowledge

- creative and different ways of expressing and communicating ideas, and of making an opportunity pitch
- different ways in which individuals receive and respond to ideas and information, and what influences their response
- nature and role of risk taking in the presentation and debate of ideas
- role of storytelling in communicating ideas and key storytelling techniques
- techniques to tailor comments to particular audiences.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • creative and articulate presentations that provoke interest and response • active and confident participation in critical debate and discussion of ideas.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • presentations to others about ideas • discussion and debate with others about ideas.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • direct observation of candidate participation in presentations and debates • evaluation of candidate's skills in responding to new and different communication situations • evaluation of candidate telling a story, making a pitch or presenting ideas to complete strangers in 'different' environments (e.g. in a restaurant, in the corridor, on a bus, in a lift).
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Key themes, messages and positions</i> may relate to:</p>	<ul style="list-style-type: none"> • essence of the idea • influences on the idea • relationship of idea to established tradition or practice • relationship of idea to new and emerging technology • problems and challenges with the idea • reasons why the idea should be supported • selling a creative team • selling creative ideas • selling self as a creative person • way the idea was developed • who had developed the idea and why
<p><i>Different ways of communicating ideas</i> may be:</p>	<ul style="list-style-type: none"> • aural • group presentation/pitch • in a forum • in elevators • one-on-one discussion • on planes • oral • remote (e.g. video conferencing) • visual
<p><i>Individuals</i> may be:</p>	<ul style="list-style-type: none"> • colleagues • community members • friends • gallery owners • interviewers (media) • investors • mentors • panels • peers • students • supervisors or managers

RANGE STATEMENT	
<i>Different techniques to engage, fascinate and involve others</i> may include:	<ul style="list-style-type: none"> • blogging • media releases • multimedia presentations • music • photography • storytelling • viral marketing • visual depictions
<i>Innovative approaches to communication challenges</i> may involve ability to:	<ul style="list-style-type: none"> • get across all key messages in a short time • present on unfamiliar topic • respond to impromptu situations • structure information quickly and effectively
<i>Specific ways to provoke and encourage response</i> may include:	<ul style="list-style-type: none"> • use of engaging objects to explain idea
<i>Risks</i> may involve:	<ul style="list-style-type: none"> • acknowledging own limits and difficulties • asking for help • breaking out of accepted norms • divulging personal information or vulnerabilities • failing and learning from it • incorporating humour • taking a fun approach with a potentially serious audience
<i>Substantiated positions</i> may be positions which are:	<ul style="list-style-type: none"> • grounded in appropriate research • result of rational and logical thought • subjected to the analysis of others (e.g. peer review) • supported by relevant information

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Creativity and Innovation - Creative Thinking
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Co-requisite units

Co-requisite units		

BSBCRT402A Collaborate in a creative process

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to collaborate in a creative process.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who participate in a collaborative creative process in a work or broader life context. It is relevant to individuals who are involved in what is traditionally considered creative endeavour but is also very important in broader business and community activities where creative team effort is highly valued.</p> <p>The unit focuses on effective engagement in a collaborative process, underpinned by a commitment to trust and ethics as a key feature of collaborative creative effort.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Enter into a collaborative creative process	1.1. Adopt a <i>personal philosophy of trustworthy and ethical behaviour</i> 1.2. Maximise the possibilities of sustaining creative partnerships through trustworthy and ethical behaviour 1.3. Use <i>professional discretion and judgement</i> in dealing with others 1.4. Acknowledge and respect the <i>different ways that different people may contribute</i> to the creative process 1.5. Acknowledge and work within the legal framework that applies to creative content as part of individual commitment to an ethical approach 1.6. Respect collaborative efforts by relinquishing individual ownership of ideas
2. Engage in a collaborative creative process	2.1. Maintain a <i>belief in personal ideas</i> , combined with a willingness to move on as ideas are discarded and others evolve 2.2. Be prepared to let go of own vanity and ego to allow new ideas to emerge 2.3. Use <i>language</i> and adopt a <i>demeanour</i> that demonstrates respect and trust for others 2.4. Listen to, value, respect and trust the contributions of others as material to work with rather than positions to argue against 2.5. Challenge, test and share ideas in a supportive way as part of the creative process 2.6. Move on from initial positions and preconceptions to accept and embrace new and unpredictable ideas as they emerge during the creative process 2.7. Play a role that encourages the <i>movement and shift of ideas</i> within the group towards a well-conceived solution
3. Reflect on own role in the collaborative creative process	3.1. Reflect on own level of participation, relationships with others and personal behaviour in the collaborative process 3.2. Identify ways to do better next time and follow up on any issues that need to be resolved 3.3. Identify and seek opportunities to refine and expand own skills and knowledge, including learning from

ELEMENT	PERFORMANCE CRITERIA
	failing

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to nurture trust, to model open and supportive communication, and to articulate potentially complex ideas
- creative thinking skills to generate and explore ideas
- learning and self-management skills to reflect on and enhance own ability to contribute effectively to a collaborative creative process
- problem-solving skills to continually be evaluating and challenging ideas and moving them forward towards solutions.

Required knowledge

- concept of shared intellectual property from collaborative creativity
- concepts of trust and ethical behaviour in the context of creative endeavour
- different roles people may play in a collaborative creative process and how this contributes to the overall effort
- how the creative process works in different situations (e.g. as an individual, as part of a group)
- how the potential for creativity can be maximised within a team
- legal framework that affects copyright, moral rights and intellectual property issues
- what stops creativity in a group environment.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • positive and full participation in a collaborative creative process that generates, expands and develops ideas into a well-conceived solution • communication and creative-thinking skills that make a positive contribution to the collaborative effort • knowledge and understanding of the ethical framework in which any type of creative endeavour operates.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • involvement of a team of people in the collaborative creative process.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • direct observation of the candidate participating in collaborative creative activity • interviews with others participating in the process to determine the nature and quality of the candidate's participation and interactions • evaluation of candidate presentation (verbal or written) on the collaborative process, including challenges, benefits and key learning for the future • oral or written questioning to assess knowledge of concepts of trust and ethical behaviour in the context of creative endeavour.
Guidance information for assessment	A collaborative creative effort always occurs in a specific context. Therefore holistic assessment with other units relevant to the industry sector, workplace and job role is highly recommended. Assessors must, however, retain a strong focus on the key aspects of collaboration and

EVIDENCE GUIDE

creativity detailed in this unit. Combined assessment with the following unit would also be appropriate:

- BSBCRT301A Develop and extend critical and creative thinking skills.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Personal philosophy of trustworthy and ethical behaviour</i> may relate to:</p>	<ul style="list-style-type: none"> • acknowledging discomfort or anger • being prepared to fully participate • communicating in an open way • honesty • honouring commitments • sensitivity to social, cultural, personal situations and dynamics • showing respect • understanding of the consequences of actions
<p><i>Professional discretion and judgement</i> may relate to:</p>	<ul style="list-style-type: none"> • assessing when to keep quiet • being aware of and responding to different personality types • knowing when it is appropriate or inappropriate to share information • knowing with whom information should be shared
<p><i>Different ways that different people may contribute</i> may relate to:</p>	<ul style="list-style-type: none"> • different approaches to expressing opinions or ideas • inclinations to lead or follow • influence with others • interpersonal skills • networks • past experience • technical skills and expertise
<p><i>Belief in personal ideas</i> may be demonstrated by:</p>	<ul style="list-style-type: none"> • backing ideas up with information and rationale • being prepared to argue for own ideas • confidence in own ability to create many ideas • confidence to share ideas • confident articulation of ideas • spending time developing and refining own ideas
<p><i>Language</i> that demonstrates</p>	<ul style="list-style-type: none"> • acknowledging new ideas and effort

RANGE STATEMENT	
respect for others may involve:	<ul style="list-style-type: none"> • avoiding negative words • avoiding personal negatives like 'you cannot' or 'you should not' • choosing words wisely • listening • making differentiations between ideas and people • managing tone • speaking at a level appropriate to the listener
<i>Demeanour</i> that demonstrates respect for others may relate to:	<ul style="list-style-type: none"> • avoiding intellectual bullying • encouraging others to express ideas • facial expression • keeping a positive mindset • listening before speaking • physical position • refraining from blame or accusation • other non-verbal behaviour • understanding the balance between constructive comment and attention seeking
<i>Movement and shift of ideas</i> may involve:	<ul style="list-style-type: none"> • building in 'what if' scenarios • encouraging a stocktake before moving forward • making connections between seemingly disparate ideas • refining ideas that seem positive • returning to earlier ideas • returning to key objectives • suggesting new processes • turning ideas 'on their head' to resolve blockages

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Creativity and Innovation - Creative Process
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Co-requisite units

Co-requisite units		

BSBCRT403A Explore the history and social impact of creativity

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to explore the history and social impact of creativity.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who develop and apply knowledge of the history of creativity at a broad rather than deep level. Understanding the concept of creativity, how creative people think and how creativity has been applied through history can provide individuals with inspiration and ideas to take into their own work and lives.</p> <p>More complex research on theories of creativity is found in BSBCRT601A Research and apply concepts and theories of creativity.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Investigate the history of creativity	1.1. Identify relevant <i>sources of information</i> on the history of creativity 1.2. Investigate and review different definitions of creativity and how these relate in an historical context 1.3. Assess the ways that individuals and collaborative groups have demonstrated creativity 1.4. Explore the relationship between creativity and different cultures and relate these to current contexts
2. Assess the impacts of creativity	2.1. Explore the <i>impacts of creativity</i> on the ways that people live and work 2.2. Explore the ways in which creativity has occurred in <i>different fields of human endeavour</i> 2.3. Determine and evaluate the <i>factors that affect the presence or extent of creativity</i> in a given situation
3. Evaluate the potential for enhancing creativity in own life	3.1. Extract key information and ideas from the history of creativity for possible relevance to own life and work 3.2. Discuss and explore ideas with others 3.3. Reflect on how creativity or creative thinking might be integrated into own life and work 3.4. Identify and access <i>opportunities to build own creative thinking skills</i>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to discuss and explore ideas about creativity with others
- comprehension skills to interpret information dealing with potentially complex ideas.

Required knowledge

- impact of creativity at different points in history, including contemporary perspectives
- potential links between the history of creativity and current individuals and communities
- sources of information on the history and social impact of creativity
- ways in which different factors impact on creativity and how it is demonstrated in various cultural contexts.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> knowledge and understanding of the history and social impact of creativity, including its contemporary relevance to individuals and communities.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to sources of information on the history of creativity.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate evaluation of candidate's exploration of creativity and its impact, demonstrated through oral or written presentation oral or written questioning to assess knowledge of creativity in an historical and contemporary context review of identification of opportunities to build own creative thinking skills.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Sources of information</i> may include:</p>	<ul style="list-style-type: none"> • artistic works (visual, aural, oral) • arts co-operatives • clubs • friends and family • internet • printed references and texts • production teams
<p><i>Impacts of creativity</i> may include:</p>	<ul style="list-style-type: none"> • archaeological discoveries • botanical/anthropological discoveries • change in nature of communication between individuals and communities • changed relationships between gender and generations • changes in style • conservative versus adventurous culture and social mindset • improvement in living conditions • new products and services • reduced costs • scientific discoveries • sudden or gradual political change • totally new ways of undertaking tasks
<p><i>Different fields of human endeavour</i> may be:</p>	<ul style="list-style-type: none"> • agriculture • arts • science • subsistence - primitive societies • technology
<p><i>Factors that affect the presence or extent of creativity</i> may include:</p>	<ul style="list-style-type: none"> • culture • economic • environmental • family • friends • political

RANGE STATEMENT	
	<ul style="list-style-type: none"> • right time and place • social
<i>Opportunities to build own creative thinking skills</i> may include:	<ul style="list-style-type: none"> • attendance at seminars • participation in creative activities • reviewing and adapting own communication skills • using new approaches to work • working in creative communities

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Creativity and Innovation - Creative Thinking
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Co-requisite units

Co-requisite units		

BSBCRT501A Originate and develop concepts

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to originate and develop concepts for products, programs, processes or services to an operational level. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.
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Application of the Unit

<p>Application of the unit</p>	<p>This unit applies to individuals who originate and develop concepts of some complexity and progress that concept to the point where it can be implemented. Individuals may be employed by organisations, be sub contractors or consultants brought in by companies to work on specific projects, or be individuals or part of a team working independently.</p> <p>Concepts could be developed for any business or community activity or process such as marketing campaigns, staff development programs, information technology and communication systems. This unit is also highly relevant to practitioners in the creative industries who develop products such advertising campaigns, radio and television programs, entertainment events, films, exhibitions and digital media products.</p> <p>A person undertaking this role would operate with a high degree of autonomy and at a senior level if working within an organisation. However, the process of generating concepts and ideas is collaborative in nature.</p> <p>Skills associated with writing proposals to support concept development are covered in BSBWRT401A Write complex documents.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

<p>Prerequisite units</p>		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Evaluate and explore needs and opportunities	<p>1.1. Research and evaluate <i>existing information that informs new concept development</i></p> <p>1.2. Where appropriate, identify and use gaps in current range of <i>products, programs, processes or services</i> as the catalyst for generating new ideas or concepts</p> <p>1.3. Expand the potential of new ideas through <i>exploration of opportunities beyond the obvious</i></p> <p>1.4. Identify <i>factors</i> that could have an impact on ideas or concepts to be developed, including potential for commercialisation</p> <p>1.5. Determine whether other players are filling identified gaps or investigating similar opportunities</p> <p>1.6. Develop preliminary ideas on innovative and different ways to address needs and opportunities</p> <p>1.7. In consultation with <i>relevant stakeholders</i>, agree on broad parameters for developing ideas and concepts to meet market requirements</p>
2. Develop a range of creative approaches	<p>2.1. Use a range of <i>creative thinking techniques</i> to generate innovative and creative concepts to address identified needs</p> <p>2.2. Challenge, test and experiment with different concepts and ideas as part of a collaborative process</p> <p>2.3. Evaluate concepts in terms of their suitability for the target audience or purpose, their feasibility and their commercial potential</p> <p>2.4. Take account of social, ethical and environmental issues as concepts and ideas are generated and discussed</p> <p>2.5. Identify <i>resources</i> required to achieve desired creative and innovative outcomes</p> <p>2.6. Evaluate the effectiveness of different strategies for achieving desired outcomes</p> <p>2.7. Select concepts or approaches that achieve required outcomes in an innovative and feasible way</p> <p>2.8. Present proposed concepts or approaches in an appropriate <i>format</i></p>
3. Refine concepts	<p>3.1. Ensure concept development process is open to ongoing refinement and testing</p> <p>3.2. Seek input and feedback on concepts from relevant stakeholders</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Seek specialist advice on creative and technical aspects of proposals as required</p> <p>3.4. Compare concepts with best practice examples of similar products, programs, processes or services</p> <p>3.5. Use a range of <i>creative and practical criteria</i> to determine the advantages and disadvantages of different concepts</p> <p>3.6. Evaluate <i>constraints</i> on the realisation of concepts or ideas</p> <p>3.7. Refine proposals based on analysis and feedback</p>
4. Develop concepts to an operational level	<p>4.1. Use refined concepts as the basis for developing detailed <i>implementation specifications</i></p> <p>4.2. Present specifications to relevant parties for approval, funding or endorsement</p> <p>4.3. Reflect on methodology used to generate concepts and ideas and note ways of improving this in the future</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication and teamwork skills to work collaboratively on ideas and to articulate the rationale for concepts in ways that promote constructive discussion with others
- creative thinking skills to generate a range of innovative concepts and ideas, to use lateral thinking and to take a visionary approach to developing concepts and ideas
- initiative and enterprise skills to pro-actively identify market requirements
- planning and organising skills to take account of practical issues for concept implementation
- self-management skills to meet deadlines.

Required knowledge

- broad context in which concepts are being developed
- cultural, social and environmental issues and impacts to be considered in developing new concepts
- issues and requirements to commercialise the concept
- legal requirements that affect work in a given industry context
- practical and operational issues to be considered in a specific work or community context
- range of broad practical and operational issues that determine whether a concept can be implemented (in any context)
- techniques for generating creative ideas and solutions, and for translating these ideas into workable concepts.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • development of at least two concepts, substantiated and supported with sufficient information to allow for implementation to occur • generation of concepts and ideas that provide innovative solutions to identified issues • knowledge of legal requirements that affect work in a given industry context.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to the full range of background information required to evaluate the operational factors that will affect the implementation of concepts • interaction with others to reflect the collaborative nature of the concept development process.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • evaluation of concepts generated by the candidate, of the processes used to generate and test the ideas and the material developed to support the concept • debate and discussion with the candidate to assess knowledge of the operational context and the broader factors that impact on concept development • evaluation of presentation or 'pitch' made by the candidate in relation to a particular concept • oral or written questioning to assess knowledge of cultural, social and environmental issues and impacts to be considered in developing new concepts.
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Existing information that informs new concept development</i> may include:	<ul style="list-style-type: none"> • creative brief • market research • organisational vision • personal vision and creative aspiration
<i>Products, programs, processes or services</i> may include:	<ul style="list-style-type: none"> • art and craft works • advertising campaigns • business services and processes • designs • festivals • films • interactive digital media products • live entertainment productions or events • manufactured products • marketing and promotional campaigns • museum and gallery exhibitions • photoimaging services • radio or television programs
<i>Exploration of opportunities beyond the obvious</i> may involve:	<ul style="list-style-type: none"> • challenging existing assumptions and preconceptions • considering radical change to the way things are done • exploring practice in a totally different industry context • investigating the use of new media • making connections between seemingly unrelated activities
<i>Factors</i> may include:	<ul style="list-style-type: none"> • codes of practice • content • cost effectiveness • features of interactive digital media products: <ul style="list-style-type: none"> • delivery platform • level of interactivity

RANGE STATEMENT	
	<ul style="list-style-type: none"> • look and feel • navigation • Indigenous laws and protocols • length of program or film • level of skill and understanding required for implementation • nature and size of target audience • organisational charter and policies • purpose: <ul style="list-style-type: none"> • advertising or marketing • commercial • educational • entertainment • game • information • relevant legislation, such as: <ul style="list-style-type: none"> • copyright and intellectual property • privacy • results of market research • revenue raised by existing market share • technical feasibility
<i>Relevant stakeholders</i> may include:	<ul style="list-style-type: none"> • administrative staff • clients/customers • designers and other creative personnel • directors • external suppliers • information technology personnel • management • program producers • technical specialists • writers
<i>Creative thinking techniques</i> may include:	<ul style="list-style-type: none"> • brainstorming: <ul style="list-style-type: none"> • bulletin board • buzz session • computer-aided • sequencing • stop and go • Edward de Bono's six thinking hats • ego alter or heroes

RANGE STATEMENT	
	<ul style="list-style-type: none"> • graphic organisers: <ul style="list-style-type: none"> • concept fans • visual maps • webbing • lateral thinking games • making associations • mind mapping • morphological analysis • sub-culture surfing • trigger words • use of metaphors and analogies • vision circles • word salads • visualisation
Resources may include:	<ul style="list-style-type: none"> • computer hardware and software • facilities • printed material • specialist equipment • specialist staff • training
Formats may include:	<ul style="list-style-type: none"> • application forms to funding bodies or sponsors • briefs for consultants • concept maps • electronic presentations to promote the concept • in-house proposal forms
Creative and practical criteria may include:	<ul style="list-style-type: none"> • cost-effectiveness • evaluation against competing priorities • fit with personal vision and aspirations • fit with strategic directions of organisation • fit with target market needs • how innovative the concept is • level of risk • potential benefits • technical feasibility • time to realise the concept
Constraints may include:	<ul style="list-style-type: none"> • availability of resources and equipment • availability of skilled experts and personnel • cost

RANGE STATEMENT	
	<ul style="list-style-type: none"> • level of technical difficulty • limited funding sources • limited potential for commercialisation • time
<i>Implementation specifications</i> may include:	<ul style="list-style-type: none"> • briefs for work • detailed specification of concept including purpose and content • operational plan with responsibilities and time lines • resources breakdown (financial, human and physical)

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Creativity and Innovation - Creative Thinking
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Co-requisite units

Co-requisite units	

BSBCRT601A Research and apply concepts and theories of creativity

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to undertake research into different concepts and theories of creativity, and to apply those to a particular field of endeavour.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who use sophisticated research and critical analysis skills in the exploration of creativity and its application to work and life practice. This research may be related specifically to fields of practice traditionally considered as 'creative', such as the arts, but may equally relate to much broader fields of human activity and endeavour.</p> <p>The scope of the research activity has both significant depth and breadth. A broader, more general approach to the ideas and history surrounding creativity is found in BSBCRT403A Explore the history and social impact of creativity.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Research concepts and theories of creativity	1.1. Use a range of <i>research techniques</i> to source information about creativity 1.2. Identify and explore potential <i>new, emerging and alternative sources of ideas and thinking</i> about creativity 1.3. Expand own knowledge and understanding of creativity through review and <i>critical analysis</i> of information 1.4. Analyse, compare and contrast a <i>range of theoretical perspectives and thinking</i> on creativity 1.5. Identify and explore the transmigration of creative thought to innovative output
2. Apply theories of creativity to practice	2.1. Evaluate the relevance and application of different theories and practices of creativity based on analysis of <i>own work and life experience</i> 2.2. Analyse the ways in which different aspects of history, theory and other influences are applied, adapted or challenged in practice 2.3. Assess the ways in which theories, thinking and practices about creativity may be applied that provide <i>benefits to individuals, businesses and the community</i>
3. Develop, articulate and debate own perspectives theories and practices of creativity	3.1. Take a critical approach to different theories and reflect on own ideas and responses 3.2. Develop own <i>substantiated positions</i> in response to research and analysis 3.3. Articulate own positions in a manner which demonstrates <i>clarity of thought and conceptual understanding</i> of different theories and thinking 3.4. Debate own positions on creativity showing belief in own ideas and a willingness to remain open to new perspectives

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- critical thinking skills to analyse complex information and to develop and substantiate own positions and responses to theories and thinking around creativity
- communication skills to articulate and debate complex concepts
- literacy and problem solving skills to research information dealing with complex concepts and theories of creativity
- self-management skills to develop and substantiate own views and ideas.

Required knowledge

- different theories and concepts of creativity, including different historical perspectives and current and emerging thinking
- potential and actual benefits of creativity for individuals, businesses and communities
- relationship between theories of creativity and creativity in practice (in a particular work or broader social context).

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • conduct of at least one research project into past, current and emerging theories of creativity • development of substantiated positions on creativity and its application in response to own analysis and research • knowledge of different theories and thinking on creativity and its application in different social and work contexts.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • use of current and emerging sources of information and thinking on creativity.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • evaluation of research undertaken by the candidate into theories and application of creativity • observation of the candidate participating in discourse and debate on theories of creativity and on the candidate's own positions and ideas.
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Research techniques</i> may include:</p>	<ul style="list-style-type: none"> • analysis of consumer trends • desk research • finding style leaders • informal discussions • internet search • interviews • literature reviews • observation of creative workers processes and behaviours • personal experience • tracking trendsetters
<p><i>New, emerging and alternative sources of ideas and thinking</i> may include:</p>	<ul style="list-style-type: none"> • component resourcing • consumer trends • current business theories • emerging government policy • emerging research • fashion/design trends • grazing hardware, electronics, junk, second hand goods etc. • individuals in any fields of endeavour • innovative organisations • international trends • new products and sub assembly components • social trends
<p><i>Critical analysis</i> may involve:</p>	<ul style="list-style-type: none"> • adapting • analysing and evaluating actions and policies • challenging • clarifying issues, values and standards • comparing analogous situations • comparing and contrasting ideals with practice • comparing and evaluating beliefs, interpretations and theories • critical path process

RANGE STATEMENT	
	<ul style="list-style-type: none"> • debate and discussion • developing criteria for evaluation • distinguishing relevant from irrelevant facts • examining and evaluating assumptions • exploring implications and consequences • generating and assessing solutions • ideational connecting of unrelated information • judging • leap of faith • making interdisciplinary connections • making plausible inferences and predictions • noting significant similarities and differences • obtuse connections • openness • questioning • reading and listening critically • reflecting
<i>Range of theoretical perspectives and thinking</i> may be:	<ul style="list-style-type: none"> • economic • environmental • geographic • heritage • historical • local, national, international • political • philosophical • social/cultural • style/design
<i>Own work and life experience</i> may include:	<ul style="list-style-type: none"> • evaluation of contexts in which creativity has flourished • observation of nature • observation of the man-made environment • observations of the ways people interrelate • reflection on own creative thinking and endeavours • reflection on own experience with any type of creative endeavour or creative thinking • workplace experience
<i>Benefits to individuals, businesses and the community</i> may include:	<ul style="list-style-type: none"> • adaptability • better individual and business relationships • capacity for innovation and invention

RANGE STATEMENT	
	<ul style="list-style-type: none"> • curiosity • environmentally sustainable practices • greater social cohesion • high degree of value adding • improved productivity and profit • nimbleness of thought • psychological wellbeing of individuals and communities
<i>Substantiated positions</i> may be positions which are:	<ul style="list-style-type: none"> • grounded in appropriate research • result of rational and logical thought • supported by relevant information • subjected to the analysis of others (e.g. peer review)
<i>Clarity of thought and conceptual understanding</i> may be demonstrated by:	<ul style="list-style-type: none"> • ability to exchange and debate ideas with others • appropriate distillation of ideas to suit the required purpose • audience understanding • clear articulation of ideas

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Creativity and Innovation - Creative Thinking
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Co-requisite units

Co-requisite units	

BSBCUS201A Deliver a service to customers

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to deliver all aspects of customer service at an introductory level. It includes creating a relationship with customers, identifying their needs, delivering services or products and processing customer feedback.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who perform a range of routine tasks in the workplace using a limited range of practical skills and fundamental knowledge of customer service in a defined context under direct supervision or with limited individual responsibility.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish contact with customers	1.1. Acknowledge and greet customer in a professional, courteous and concise manner according to organisational requirements 1.2. Maintain personal dress and presentation in line with organisational requirements 1.3. Communicate using appropriate interpersonal skills to facilitate accurate and relevant exchange of information 1.4. Maintain sensitivity to customer specific needs and any cultural, family and individual differences 1.5. Establish rapport/relationship with customer and express a genuine interest in customer needs/requirements
2. Identify customer needs	2.1. Use appropriate questioning and active listening to determine customer needs 2.2. Assess customer needs for urgency to identify priorities for service delivery 2.3. Provide customer with information about available options for meeting customer needs and assist customer to identify preferred option/s 2.4. Identify personal limitations in addressing customer needs and seek assistance from designated persons where required
3. Deliver service to customers	3.1. Provide prompt customer service to meet identified needs according to organisational requirements 3.2. Provide information regarding problems and delays, and follow-up within appropriate timeframes as necessary 3.3. Communicate with customers in a clear, concise and courteous manner 3.4. Identify opportunities to enhance the quality of service and products, and take action to improve the service whenever possible
4. Process customer feedback	4.1. Promptly recognise customer feedback and handle sensitively according to organisational requirements 4.2. Accurately record any feedback and communication between customers and the organisation according to organisational standards, policies and procedures 4.3. Identify any unmet customer needs and discuss suitability of other products/services

ELEMENT	PERFORMANCE CRITERIA
	4.4. Support customers to make contact with other services according to organisational policies and procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to convey meaning clearly, concisely and coherently
- culturally appropriate communication skills to relate to people from diverse backgrounds and people with diverse abilities
- literacy skills to communicate with customers and to develop required product knowledge
- numeracy skills to interpret customer requirements and to meet customer needs
- problem-solving skills to deal with customer enquiries or complaints.

Required knowledge

- key provisions of relevant legislation from all forms of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - occupational health and safety (OHS)
- organisational policies and procedures relating to customer service and the customer service process.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • demonstrating all stages of customer service interactions • responding to customer feedback • demonstrating a range of interpersonal skills • knowledge of relevant legislation.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of customer complaints and policies relating to customer service.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • analysis of responses to case studies and scenarios • demonstration of techniques • observation of presentations • oral or written questioning to assess knowledge of customer service and communication techniques • review of information provided to customers about problems and delays, and customer follow-up • review of documentation recording feedback and communication between customers and the organisation.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • sales units • other customer service units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Customers</i> may include:	<ul style="list-style-type: none"> • contacts from other organisations • external customers • internal customers • members of the public • patients • service users
<i>Organisational requirements</i> may include:	<ul style="list-style-type: none"> • access and equity principles and practice • anti-discrimination and related policy • following OHS procedures for dealing with customers • legal and organisational policies, guidelines and requirements • quality and continuous improvement processes and standards • quality assurance and/or procedures manual
<i>Interpersonal skills</i> may include:	<ul style="list-style-type: none"> • listening actively to what the customer is communicating • providing an opportunity for the customer to confirm their request • questioning to clarify and confirm customer needs • seeking feedback from the customer to confirm understanding of needs • summarising and paraphrasing to check understanding of customer's message • using appropriate body language
<i>Designated persons</i> may include:	<ul style="list-style-type: none"> • manager, supervisor or team leader • more experienced personnel with specific knowledge or information • staff from other work areas with particular product or service knowledge
<i>Opportunities</i> may include:	<ul style="list-style-type: none"> • advice about warranties, guarantees or support services

RANGE STATEMENT	
	<ul style="list-style-type: none"> • packaging options • pricing options • procedures for delivery of goods or service • provision of product knowledge • systems for recording complaints
<i>Customer feedback</i> may be about:	<ul style="list-style-type: none"> • damaged goods or delivery problems • delays • invoicing errors • quality of customer service • quality of service provision

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Stakeholder Relations - Customer Service
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Co-requisite units

Co-requisite units	

BSBCUS301A Deliver and monitor a service to customers

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to identify customer needs and monitor service provided to customers.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who are skilled operators and apply a broad range of competencies in various work contexts. They may exercise discretion and judgement using appropriate theoretical knowledge of customer service to provide technical advice and support to customers over either a short or long term interaction.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify customer needs	1.1. Use <i>appropriate interpersonal skills</i> to accurately identify and clarify <i>customer needs and expectations</i> 1.2. Assess customer needs for urgency to determine priorities for service delivery in accordance with <i>organisational requirements</i> 1.3. Use <i>effective communication</i> to inform customers about available choices for meeting their needs and assist in the selection of preferred options 1.4. Identify limitations in addressing customer needs and seek appropriate assistance from <i>designated individuals</i>
2. Deliver a service to customers	2.1. Provide prompt service to customers to meet identified needs in accordance with organisational requirements 2.2. Establish and maintain appropriate rapport with customers to ensure completion of quality service delivery 2.3. Sensitively and courteously handle <i>customer complaints</i> in accordance with organisational requirements 2.4. Provide assistance or respond to customers with <i>specific needs</i> in accordance with organisational requirements 2.5. Identify and use available <i>opportunities</i> to promote and enhance services and products to customers
3. Monitor and report on service delivery	3.1. Regularly review customer satisfaction with service delivery using <i>verifiable evidence</i> in accordance with organisational requirements 3.2. Identify opportunities to enhance the quality of service and products, and pursue within organisational requirements 3.3. Monitor procedural aspects of service delivery for effectiveness and suitability to customer requirements 3.4. Regularly seek customer feedback and use to improve the provision of products and services 3.5. Incorporate evidence of customer satisfaction in decisions to modify products or services, ensuring they are within organisational requirements 3.6. Ensure reports are clear, detailed and contain recommendations focused on critical aspects of

ELEMENT	PERFORMANCE CRITERIA
	service delivery

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to read and understand a variety of texts; to prepare general information and papers according to target audience; and to edit and proofread texts to ensure clarity of meaning and accuracy of grammar and punctuation
- technology skills to select and use technology appropriate to a task
- communication skills to monitor and advise on customer service strategies
- problem-solving skills to deal with customer enquiries or complaints
- analytical skills to identify trends and positions of products and services.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - financial legislation
 - occupational health and safety (OHS)
- organisational policy and procedures for customer service including handling customer complaints
- service standards and best practice models
- public relations and product promotion
- techniques for dealing with customers, including customers with specific needs.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • identifying needs and priorities of customers • distinguishing between different levels of customer satisfaction • treating customers with courtesy and respect • responding to and reporting on, customer feedback • knowledge of organisational policy and procedures for customer service.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of customer complaints • examples of documents relating to customer service standards and policies.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of reports on customer service delivery • analysis of responses to case studies and scenarios • demonstration of techniques • oral or written questioning to assess knowledge of customer service strategies.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • sales units • other customer service units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Appropriate interpersonal skills</i> may include:</p>	<ul style="list-style-type: none"> • listening actively to what the customer is communicating • providing an opportunity for the customer to confirm their request • questioning to clarify and confirm customer needs • seeking feedback from the customer to confirm understanding of needs • summarising and paraphrasing to check understanding of customer message • using appropriate body language
<p><i>Customers</i> may include:</p>	<ul style="list-style-type: none"> • corporate customers • individual members of the organisation • individual members of the public • internal or external • other agencies
<p><i>Customer needs and expectations</i> may include:</p>	<ul style="list-style-type: none"> • accuracy of information • advice or general information • complaints • fairness/politeness • further information • making an appointment • prices/value • purchasing organisation's products and services • returning organisation's products and services • specific information
<p><i>Organisational requirements</i> may include:</p>	<ul style="list-style-type: none"> • access and equity principles and practice • anti-discrimination and related policy • defined resource parameters • goals, objectives, plans, systems and processes • legal and organisational policies, guidelines and requirements • OHS policies, procedures and programs

RANGE STATEMENT	
	<ul style="list-style-type: none"> • payment and delivery options • pricing and discount policies • quality and continuous improvement processes and standards • quality assurance and/or procedures manuals • replacement and refund policy and procedures • who is responsible for products or services
<i>Effective communication</i> may include:	<ul style="list-style-type: none"> • giving customers full attention • maintaining eye contact, except where eye contact may be culturally inappropriate • speaking clearly and concisely • using active listening techniques • using appropriate language and tone of voice • using clear written information/communication • using non-verbal communication e.g. body language, personal presentation (for face-to-face interactions) • using open and/or closed questions
<i>Designated individuals</i> may include:	<ul style="list-style-type: none"> • colleagues • customers • line management • supervisor
<i>Customer complaints</i> may include:	<ul style="list-style-type: none"> • administrative errors such as incorrect invoices or prices • customer satisfaction with service quality • damaged goods or goods not delivered • delivery errors • product not delivered on time • service errors • warehouse or store room errors such as incorrect product delivered
<i>Specific needs</i> of customers may relate to:	<ul style="list-style-type: none"> • age • beliefs/values • culture • disability • gender • language • religious/spiritual observances
<i>Opportunities</i> to promote and enhance services and products	<ul style="list-style-type: none"> • extending time lines • packaging procedures

RANGE STATEMENT	
may include:	<ul style="list-style-type: none"> • procedures for delivery of goods • returns policy • system for recording complaints • updating customer service charter
<i>Verifiable evidence</i> may include:	<ul style="list-style-type: none"> • customer satisfaction questionnaires • audit documentation and reports • quality assurance data • returned goods • lapsed customers • service calls • complaints

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Stakeholder Relations - Customer Service
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Co-requisite units

Co-requisite units		

BSBCUS402A Address customer needs

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to manage the ongoing relationship with a customer, which includes assisting the customer to articulate their needs, meeting customer needs and managing networks to ensure customer needs are addressed.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to workers required to be familiar with a product and/or service that varies widely and is capable of significant customisation. The customer relationship would typically involve direct interaction a number of times over an extended period.</p> <p>This unit is appropriate to workers who are expected to have detailed product knowledge in order to recommend customised solutions. They would be expected to apply organisational procedures and be aware of, and apply as appropriate, broader factors involving ethics, industry practice and relevant government policies and regulations.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assist customer to articulate needs	1.1. Ensure <i>customer</i> needs are fully explored, understood and agreed 1.2. Explain and match available services and products to customer needs 1.3. Identify and communicate <i>rights and responsibilities of customers</i> to the customer as appropriate
2. Satisfy complex customer needs	2.1. Explain possibilities for meeting customer needs 2.2. Assist customers to evaluate service and/or product options to satisfy their needs 2.3. Determine and prioritise preferred actions 2.4. Identify potential areas of difficulty in customer service delivery and take appropriate actions in a positive manner
3. Manage networks to ensure customer needs are addressed	3.1. Establish <i>effective regular communication</i> with customers 3.2. Establish, maintain and expand relevant networks to ensure appropriate referral of customers to products and services from within and outside the organisation 3.3. Ensure procedures are in place to ensure that decisions about targeting of customer services are based on up-to-date information about the customer, and the products and services available 3.4. Ensure procedures are put in place to ensure that referrals are based on the matching of the assessment of customer needs and availability of products and services 3.5. Maintain records of customer interaction in accordance with <i>organisational procedures</i>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to read a variety of texts, to prepare general information and papers, and to write formal and informal letters according to target audience
- numeracy skills to analyse data, and to compare time lines and promotional costs against budgets
- problem-solving skills to develop solutions unique to a customer
- culturally appropriate communication skills to relate to people from diverse backgrounds and people with diverse abilities.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - environmental issues
 - occupational health and safety
- organisational procedures and standards for customer service relationships
- detailed product knowledge which may be of significant breadth (so as to propose alternative products and services), or of significant depth (so as to propose variations within a limited product and service range).

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • assisting customers to articulate their needs • documenting processes used and customer satisfaction with the products/services offered • assisting customers to address their needs.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of products/services and promotional strategies.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of documentation prioritising preferred actions • analysis of responses to case studies and scenarios • demonstration of techniques • observation of presentations • assessment of written reports • evaluation of communication established with customers • review of customer interaction records.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • general administration units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Customers</i> may include:</p>	<ul style="list-style-type: none"> • customers with routine or specific requests • in person, computer-based and telephone customers • internal and external customers • people from a range of social, cultural or ethnic backgrounds • people who may be unwell, drug affected or emotionally distressed • people with varying physical and mental abilities • regular and new customers
<p><i>Rights and responsibilities of customers</i> may include:</p>	<ul style="list-style-type: none"> • fulfilment of external obligations • informed consent
<p><i>Effective regular communication</i> may include:</p>	<ul style="list-style-type: none"> • giving customers full attention • handling sensitive and confidential issues • maintaining eye-contact (for face-to-face interactions), except where eye-contact may be culturally inappropriate • speaking clearly and concisely • using active listening techniques • using appropriate language and tone of voice • using clearly written information/communication • using non-verbal communication e.g. body language, personal presentation (for face-to-face interactions) • using open and/or closed questions
<p><i>Organisational procedures</i> may include:</p>	<ul style="list-style-type: none"> • procedural manuals • quality systems, standards and guidelines

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Stakeholder Relations - Customer Service
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Co-requisite units

Co-requisite units		

BSBDES201A Follow a design process

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to follow a design process at a basic level.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to any individual who follows a design process to respond to specific issues or challenges, including product and service requirements arising from particular business or community needs.</p> <p>The unit acknowledges the need to encourage the development of skills, which are sometimes called 'design thinking' or 'design consciousness'. In essence, the unit is about purposeful problem solving - defining the challenge, coming up with ideas, working with others to develop ideas, reflecting on progress, presenting an idea so it can be implemented and, of course, evaluating whether an idea has met the original challenge.</p> <p>Designers use the processes described in this unit but at a much more sophisticated and complex level. This unit is not about being a designer.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Clarify the challenge	1.1. Confirm the <i>nature and scope of the challenge</i> with <i>stakeholders</i> 1.2. Agree on specific objectives with <i>stakeholders</i> 1.3. Identify any <i>constraints</i> that may impact on the design process 1.4. Identify and source <i>relevant supporting information and assistance</i>
2. Explore different ideas and solutions	2.1. Generate a range of ideas to respond to the challenge 2.2. Explore <i>different options and ideas</i> for meeting objectives 2.3. Involve others in the process of developing ideas and solutions
3. Select and present a solution	3.1. Reflect on different ideas and feedback, and select a preferred solution 3.2. Summarise the key ideas in the solution and present to stakeholders in <i>appropriate format</i> 3.3. Obtain any required approvals to take the solution to the next stage
4. Implement the solution	4.1. Schedule key tasks and organise <i>resources to support implementation</i> 4.2. Carry out <i>testing, prototyping or trialling</i> of the proposed solution 4.3. Maintain any required <i>documentation</i> 4.4. Identify problems and seek <i>advice and guidance</i> from others
5. Evaluate the solution	5.1. Check the success of the solution based on original objectives 5.2. Seek feedback from appropriate stakeholders 5.3. Review both the solution and the process undertaken to develop the solution as part of an ongoing learning process

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to liaise with others, to share ideas, and to present information and ideas clearly and concisely
- creative thinking skills to generate ideas in response to a defined problem or need in a familiar context
- literacy skills to analyse and interpret information dealing with concepts and ideas from own area of work
- problem-solving skills to identify problems and to work with others to develop solutions
- self-management skills to take responsibility for own work as part of an overall collaborative process.

Required knowledge

- context for the challenge, including any specific factors that impact on work
- creative thinking techniques that can be used to generate ideas in any context
- key features and steps in the design process as a way of thinking and solving problems
- legal framework that impacts on activities in a particular context
- potential sources of information for new ideas, relevant to the specific context.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • active participation in a project which uses the design process to develop solutions to a given challenge • effective communication skills to be a member of a collaborative team • knowledge of the design process, and how it can be used in developing solutions to different issues and challenges.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to materials, tools and equipment required to implement solutions in the given work context • interaction with others to reflect the collaborative nature of the design process.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • direct observation of the candidate participating in collaborative processes • evaluation of documentation maintained by the candidate to support different ideas • evaluation of a presentation made by the candidate outlining proposed solutions and processes used to develop those solutions • oral or written questioning to assess knowledge of parameters and context for work in a given industry context.
Guidance information for assessment	<p>The design process does not occur in isolation. Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • other technical or specialist units from particular

EVIDENCE GUIDE

	areas of work.
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Nature and scope of the challenge</i> could be very varied, and may relate to new or improved:</p>	<ul style="list-style-type: none"> • applications of materials or equipment • processes • products or services • systems • uses of technology
<p><i>Stakeholders</i> may include:</p>	<ul style="list-style-type: none"> • client • end users • friends and family • supervisor or manager • work colleagues (working in the same or different areas)
<p><i>Constraints</i> may relate to:</p>	<ul style="list-style-type: none"> • availability of materials, equipment or tools • boundaries about what can and cannot be changed • legal restrictions • time and budget
<p><i>Relevant supporting information and assistance</i> may include:</p>	<ul style="list-style-type: none"> • drawings, specifications or other technical data • ideas from colleagues • industry associations or organisations • personal experience • policy and procedures manuals • print or electronic media (including internet) • reference manuals • technical experts
<p><i>Different options and ideas</i> may be generated by:</p>	<ul style="list-style-type: none"> • brainstorming: <ul style="list-style-type: none"> • stop and go • sequencing • buzz session • bulletin board • computer-aided • daydreaming and mental wandering • Edward de Bono's six thinking hats

RANGE STATEMENT	
	<ul style="list-style-type: none"> • ego alter or heroes • graphic organisers: <ul style="list-style-type: none"> • visual maps • webbing • concept fans • lateral thinking games • making associations • mind mapping • morphological analysis • storytelling • sub-culture surfing • trigger words • use of metaphors and analogies • vision circles • visualisation • wishful thinking • word salads
<i>Appropriate format</i> may be:	<ul style="list-style-type: none"> • checklists • digital presentation • drawings/sketches • models • plans • verbal presentation
<i>Resources to support implementation</i> may include:	<ul style="list-style-type: none"> • equipment • financial resources • human resources • information technology support • materials • tools
<i>Testing, prototyping or trialling</i> may involve:	<ul style="list-style-type: none"> • creating a physical model or sample • testing the solution against different scenarios • using a small group to test the solution
<i>Documentation</i> may include:	<ul style="list-style-type: none"> • diary showing progress of work • progress reports • records of communication (e.g. emails) • working drawings
<i>Advice and guidance</i> may involve:	<ul style="list-style-type: none"> • facilitating access to networks or contacts • facilitating access to resources • providing technical expertise

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Design - Design Process
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Co-requisite units

Co-requisite units		

BSBDES202A Evaluate the nature of design in a specific industry context

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to evaluate the nature and role of design in a particular industry context.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>Design occurs in all industries and increasingly, quality design is considered a key factor in building organisational and industry capacity and competitiveness.</p> <p>This unit applies to individuals working in any context, who need to develop a basic appreciation and knowledge of the way that design works in a particular industry, and of its potential impacts on industry and individual work practice.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Source information on design in a given industry context	1.1. Investigate the <i>nature, history, role and importance of design</i> in the industry 1.2. Evaluate the roles played by designers and <i>other contributors</i> in the design process 1.3. Source information on the <i>impacts of technology</i> on design in the industry
2. Examine links between design and own work	2.1. Investigate <i>impacts of design on own work</i> 2.2. Consider <i>role of individual workers</i> across the industry in affecting future design directions
3. Keep up to date with industry design trends	3.1. Identify and access <i>opportunities to maintain currency of knowledge</i> about industry design trends 3.2. Evaluate how design trends affect the overall industry and the way it operates 3.3. Share information and pro-actively discuss emerging trends with work colleagues 3.4. Identify trends that will impact on own work and seek opportunities to develop appropriate skills

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to discuss design in a particular industry context with others
- research and literacy skills to source and interpret a wide range of information sources on design in a particular industry context
- self-management and learning skills to take responsibility for identifying and accessing professional development opportunities.

Required knowledge

- consumer/end-user expectations
- current and emerging technologies and their effects on design in the industry
- current and past designers of influence in the industry
- current trends in use of design in a given industry context
- different definitions of design, and the differences and similarities between design and product development
- major design trends in the industry
- role of design in a given industry context.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • sourcing and interpreting a range of information sources on design and applying concepts to own work situation • knowledge of design in a specific industry context, and its impact on individual work practice.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to sources of information on design in a specific industry context.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • oral or written questioning to assess knowledge of the nature, history, role and importance of design in a specific industry context.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Nature, history, role and importance of design</i> may relate to:</p>	<ul style="list-style-type: none"> • changing nature of consumer expectations • design and the role it plays in overall industry development, both locally and overseas • design as competitive edge for individual organisations • historical development of design in the industry • important design influences in the industry • links between design and legislation (e.g. specific requirements such as emission controls for vehicles, safety features of buildings, solar protection for clothing)
<p><i>Other contributors</i> may be those involved in:</p>	<ul style="list-style-type: none"> • marketing • operations • product development • production
<p><i>Impacts of technology</i> may include:</p>	<ul style="list-style-type: none"> • changes in work structures • changing staff demographics • different relationships with other industries (e.g. information technology) • different staff requirements • location changes to accommodate different technologies
<p><i>Impacts of design on own work</i> may include potential changes to:</p>	<ul style="list-style-type: none"> • cost structures and resulting work practices • equipment • materials • own roles and responsibilities • procedures • skill requirements
<p><i>Role of individual workers</i> may relate to:</p>	<ul style="list-style-type: none"> • adapting processes for greater efficiency • developing design ideas based on operational knowledge and experience • pro-actively making suggestions about new

RANGE STATEMENT	
	ways of doing things <ul style="list-style-type: none"> • providing feedback on design concepts
<i>Opportunities to maintain currency of knowledge</i> may include:	<ul style="list-style-type: none"> • attendance at seminars or other professional development opportunities • conferences • exhibitions and trade shows • formal training • industry associations or organisations • industry social functions • master classes • media (including internet) • reference manuals • unions or employer bodies

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Design - Design Process
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Co-requisite units

Co-requisite units		

BSBDES301A Explore the use of colour

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to explore the use of colour and to apply colour theory.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to any individual whose work involves the effective use of colour, and who needs to understand the basics about the way colours work. Artists, designers, photographers, lighting technicians, digital media specialists and visual merchandisers are just a few examples of people who need these skills.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Source information on colour and colour theory	1.1. Identify and access <i>sources of information on colour and colour theory</i> 1.2. Evaluate and collate information to build a knowledge of colour and its application in different contexts
2. Experiment with colour	2.1. Test different colours and colour combinations through <i>experimentation</i> 2.2. Use own ideas as a way of testing, challenging or confirming colour theory 2.3. Ensure safe use of <i>materials, tools and equipment</i> during experimentation with colour
3. Communicate concepts and ideas through use of colour	3.1. Investigate how colour might be used to communicate a particular <i>idea or concept</i> 3.2. Select materials, tools and equipment relevant to the idea or concept 3.3. Apply colour in a way that communicates the concept or idea based on own knowledge of colour and colour theory 3.4. Review and reflect on own use of colour and what it communicates 3.5. Seek and obtain feedback from others about the way colour has been used and its success in communicating the concept or idea 3.6. Present and store work any <i>samples</i> in a way which takes account of the need for professional presentation and potential relevance for future work

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to read and interpret information about colour and colour theory
- numeracy skills to calculate quantities and proportions of different colours
- visual literacy skills to make judgements about the way that different colours work together and in conjunction with other elements.

Required knowledge

- colour attributes and colour relationships
- different colour theories and their applications to different contexts
- emotional, cultural and situational aspects of colour
- individual interpretation and choice in relation to the use of colour, and the potential limitations of theory
- materials, tools and equipment required to experiment with colour in relevant contexts
- ways in which other practitioners use colour in their work.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • effective use of colour to communicate a concept or idea • knowledge of colour theory, the effects of colour and its potential use in different contexts.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to materials, resources and equipment needed to apply colour in the relevant work context.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • evaluation of colour samples produced by the candidate to communicate a concept or idea • oral or written questioning to assess knowledge of colour theory and use of colour by different practitioners.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Sources of information on colour and colour theory</i> may include:</p>	<ul style="list-style-type: none"> • anecdotal sources, personal observation • art and design work • books and magazines • characteristics of materials, for example paints, pigments • scientific texts • web-based resources
<p><i>Experimentation</i> may involve playing with:</p>	<ul style="list-style-type: none"> • application of light, for example in a theatrical context • colour attributes in hue, chroma, value • colour grading • colour models (emotional, physical and psychological effects of colour) • colour scales • colour schemes • effective colour relationships, for example harmonies and discords
<p><i>Materials, tools and equipment</i> may include:</p>	<ul style="list-style-type: none"> • air brushes • brushes • cardboard • digital equipment • fabrics/textiles/plastics • glue • gouache, watercolour, acrylic • hand tools • light sources/equipment • lighting gels • measuring tools • pastels, colour pencils, crayons • range of papers • receptacles • rulers • software

RANGE STATEMENT	
	<ul style="list-style-type: none"> • sponges • spray gun
<i>Idea or concept</i> to be communicated may relate to a huge range of activities such as:	<ul style="list-style-type: none"> • advertising and promotion • artistic works • exhibitions or events • fashion designs • interactive digital media products • interior designs • jewellery design • lighting designs • object or product design • sign making • theatrical props, sets or scenic art
<i>Samples</i> may be:	<ul style="list-style-type: none"> • colour wheels • colour swatches • constructed • digital output • drawn, painted, printed • photographs • sample boards • transitory, for example natural and artificial lighting effects

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Design - Design Process
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Co-requisite units

Co-requisite units		

BSBDES302A Explore and apply the creative design process to 2D forms

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to explore and creatively apply the design process to the development of 2 dimensional (2D) forms.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who apply the creative design process to the development of 2-dimensional forms. The unit underpins many other specialised design units.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Source information on 2-dimensional design	1.1. Identify and access relevant <i>sources of information</i> on 2-dimensional design 1.2. Evaluate and collate information to build a knowledge of 2-dimensional design
2. Explore the creative design process for 2-dimensional forms	2.1. Use <i>creative thinking techniques</i> to generate a range of ideas and options 2.2. Use <i>experimentation</i> to explore and challenge a range of different ideas 2.3. Challenge assumptions, reflect on ideas and refine approaches 2.4. Consciously change perspective, and evaluate ideas and situations in new ways
3. Communicate concepts or ideas through application of design processes to 2-dimensional forms	3.1. Investigate and reflect on how a particular <i>concept or idea</i> might be communicated in a 2-dimensional form 3.2. Select <i>materials, tools and equipment</i> relevant to the realisation of the concept or idea 3.3. Apply a creative design process to produce a range of 2-dimensional concept realisations 3.4. Reflect on own application of design process and success in communicating the concept or idea 3.5. Seek and obtain feedback from others about the 2-dimensional form and its success in communicating the concept or idea 3.6. Present and store <i>concept realisations or samples</i> in a format which takes account of the need for professional presentation and potential value for future work

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to explain ideas and to have discussions about design concepts with others
- literacy skills to read and interpret information about 2-dimensional design
- visual literacy skills to make judgements about the application of the design process to 2-dimensional forms.

Required knowledge

- copyright, moral rights, intellectual property issues and legislation, and their impact on aspects of design
- creative thinking techniques that can be used as part of the design process
- elements and principles of design as applied to 2-dimensional forms
- materials, tools and equipment required for the design of 2-dimensional forms in the relevant work context
- notion of individual interpretation and choice within the design process
- particular challenges and issues in the design of 2-dimensional forms.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • production of a range of samples or concept realisations which show the creative application of processes to 2-dimensional forms • knowledge of the design process as it applies to 2-dimensional work.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to the materials resources and equipment needed to apply design processes to 2-dimensional forms.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • evaluation of samples or concept realisations produced by the candidate and interrogation of the creative process used • oral or written questioning to assess knowledge of 2-dimensional design.
Guidance information for assessment	The design process does not occur in isolation. Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Sources of information may include:

- anecdotal sources, personal observation
- art and design work
- books and magazines
- natural and manufactured forms, objects and/or structures
- optics, including single and multiple vanishing points
- scientific texts
- web-based resources

Creative thinking techniques may include:

- brainstorming:
 - bulletin board
 - buzz session
 - computer-aided
 - sequencing
 - stop and go
- daydreaming and mental wandering
- Edward de Bono's six thinking hats
- ego alter or heroes
- graphic organisers:
 - concept fans
 - visual maps
 - webbing
- lateral thinking games
- making associations
- mind mapping
- morphological analysis
- storytelling
- sub-culture surfing
- trigger words
- use of metaphors and analogies
- vision circles
- visualisation

RANGE STATEMENT	
	<ul style="list-style-type: none"> • wishful thinking • word salads
<i>Experimentation</i> may involve consideration of:	<ul style="list-style-type: none"> • contrast • direction • exploring tonal range to produce illusion of 3-dimensionality • harmony • linear perspective • mark making • modelling volume through marks and tone • pattern • positive and negative shape • proportion • rhythm • shape • size • texture • tone
<i>Concept or idea</i> to be communicated may relate to a range of activities such as:	<ul style="list-style-type: none"> • advertising and promotion • artistic works • exhibitions or events • fashion designs • interactive digital media products • interior designs • sign making
<i>Materials, tools and equipment</i> may include:	<ul style="list-style-type: none"> • cardboard • air brushes • cutting blades • digital equipment • found materials • glue • inks and washes • markers • measuring tools • pencils • pens and nibs • range of brushes • range of papers • receptacles • relevant and current software

RANGE STATEMENT	
	<ul style="list-style-type: none"> • rulers • scissors • spatulas • sponges • spray guns
<i>Concept realisations or samples</i> may be:	<ul style="list-style-type: none"> • digital output • drawn, painted, printed, collaged • photographs

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Design - Design Process
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Co-requisite units

Co-requisite units		

BSBDES303A Explore and apply the creative design process to 3D forms

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to explore and creatively apply the design process to the development of 3 dimensional (3D) forms.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who apply the creative design process to the development of 3-dimensional forms. The unit underpins many other specialised design units.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Source information on 3-dimensional design	1.1. Identify and access relevant <i>sources of information</i> on 3-dimensional design 1.2. Evaluate and collate information to build a knowledge of 3-dimensional design
2. Explore the creative design process for 3-dimensional forms	2.1. Use <i>creative thinking techniques</i> to generate a range of ideas and options 2.2. Use <i>experimentation</i> to explore and challenge a range of different ideas 2.3. Challenge assumptions, reflect on ideas and refine approaches 2.4. Consciously change perspective, and evaluate ideas and situations in new ways
3. Communicate concepts or ideas through application of design processes to 3-dimensional forms	3.1. Investigate and reflect on how a particular <i>concept or idea</i> might be communicated in a 3-dimensional form 3.2. Select <i>materials, tools and equipment</i> relevant to the realisation of the concept or idea 3.3. Apply a creative design process to produce a range of 3-dimensional concept realisations 3.4. Reflect on own application of design process and success in communicating the concept or idea 3.5. Seek and obtain feedback from others about the 3-dimensional form and its success in communicating the concept or idea 3.6. Present and store <i>concept realisations or samples</i> in a format which takes account of the need for professional presentation and potential value for future work

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to explain ideas and to have discussions about design concepts with others
- literacy skills sufficient to read and interpret information about 3-dimensional design
- visual literacy skills to make judgements about the application of the design process to 3-dimensional forms.

Required knowledge

- copyright, moral rights, intellectual property issues and legislation, and their impact on aspects of design
- creative thinking techniques that can be used as part of the design process
- elements and principles of design as applied to 3-dimensional forms
- materials, tools and equipment required for the design of 3-dimensional forms in the relevant work context
- notion of individual interpretation and choice within the design process
- particular challenges and issues in the design of 3-dimensional forms
- relationships between form and space.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • production of a range of samples or concept realisations which show the creative application of the processes to 3-dimensional forms • knowledge of the design process as it applies to 3-dimensional work.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to the materials resources and equipment needed to apply design processes to 3-dimensional forms.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • evaluation of samples or concept realisations produced by the candidate and interrogation of the creative process used • oral or written questioning to assess knowledge of 3-dimensional design.
Guidance information for assessment	The design process does not occur in isolation. Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Sources of information may include:

- anecdotal sources, personal observation
- art and design work
- books and magazines
- natural and manufactured forms, objects and/or structures
- optics, including single and multiple vanishing points
- scientific texts
- web-based resources

Creative thinking techniques may include:

- brainstorming:
 - bulletin board
 - buzz session
 - computer-aided
 - sequencing
 - stop and go
- daydreaming and mental wandering
- Edward de Bono's six thinking hats
- ego alter or heroes
- graphic organisers:
 - concept fans
 - visual maps
 - webbing
- lateral thinking games
- making associations
- mind mapping
- morphological analysis
- storytelling
- sub-culture surfing
- trigger words
- use of metaphors and analogies
- vision circles
- visualisation

RANGE STATEMENT	
	<ul style="list-style-type: none"> • wishful thinking • word salads
<i>Experimentation</i> may involve consideration of:	<ul style="list-style-type: none"> • bending • binding • cutting • folding • mass • moulding and modelling • pasting and taping • positive and negative forms • proportion • relationships of form to form and form to space • rhythm • shape • size • stitching • stretching • symmetry, asymmetry, balance • tone • twisting
<i>Concept or idea</i> to be communicated may relate to a range of activities such as:	<ul style="list-style-type: none"> • advertising and promotion • artistic works • exhibitions or events • fashion designs • interactive digital media products • interior designs • sign making
<i>Materials, tools and equipment</i> may include:	<ul style="list-style-type: none"> • brushes • buckets and containers • clamps • clays and other plastic compounds (plasticene, plaster) • cutting tools (scissors, knives blades) • drill • fibres, tape, string • foamcore, polystyrene • found materials • glue • hammer • measuring tools

RANGE STATEMENT	
	<ul style="list-style-type: none"> • nails, screws, wire • papers, cardboard and paper pulp • pliers • recycled materials • relevant and current hardware and software • saw • shaping tools (surform blades, planers, modelling and carving tools) • wood, metal, fabric, plastic
<i>Concept realisations or samples</i> may be:	<ul style="list-style-type: none"> • digital output • fabricated and constructed works • models • prototypes

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Design - Design Process
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Co-requisite units

Co-requisite units		

BSBDES304A Source and apply design industry knowledge

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to source, apply and update a general knowledge of the design industry.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who need to source and apply knowledge on the design industry to support professional design practice.</p> <p>The unit acknowledges the concept of a design industry and design as a discrete profession. BSBDES202A Evaluate the nature of design in a specific industry context is more appropriate for those involved in design related activity as part of a broader job role.</p> <p>Design is a practice based on problem solving, aesthetics, materials and processes. It refers to professional design of work involving two dimensions and forms in space which respond to a brief, and may relate to the design of digital media, graphics, illustrative work, industrial designs, events/exhibits, fashion, jewellery, fashion accessories, furniture, furnishing, interior or urban design.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Source and apply information on the structure and operation of the design industry	1.1. Identify and access <i>information on the design industry</i> and professional design practice 1.2. Use and analyse knowledge of the design industry appropriately, to inform own design practice and work
2. Source and apply knowledge on employment obligations and opportunities that impact on designers	2.1. Obtain information on <i>employment obligations and opportunities</i> in the design industry 2.2. Apply knowledge of employment obligations and opportunities appropriately, within day-to-day work activities
3. Seek information on new design technology	3.1. Correctly identify sources of <i>information on new technology</i> affecting different areas of design practice 3.2. Investigate relevant technologies to assist effective work performance
4. Update industry knowledge	4.1. Identify and use a range of <i>opportunities to update knowledge of the design industry</i> and monitor current <i>issues of concern</i> to the industry 4.2. Share updated knowledge with colleagues and peer group as appropriate, and incorporate into day-to-day work activities
5. Apply information on ethical and legal work practices	5.1. Source <i>information on ethical and legal work practices</i> in the context of design 5.2. Share updated knowledge on ethical and legal work practice in day-to-day work activities

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to share industry information in day-to-day activities
- learning and self-management skills to take responsibility for ongoing learning and development
- research and literacy skills to source and interpret industry information.

Required knowledge

- concept of a design industry, what it means, the typical questions and issues about whether a design industry exists, and how a design industry relates to other industries
- copyright, moral rights and intellectual property issues and legislation, and their impact on the design industry
- current and emerging technologies used within the design industry
- design industry including different sectors and their interrelationships, plus the historical development of the industry
- etiquette and ethics as they apply to key design disciplines within the industry
- global nature of design activity
- impact of convergence in the design industry
- key design disciplines, how they interrelate and key roles and responsibilities
- key design industry terminology
- nature, role and functions of unions and employer associations, including rights and responsibilities of employers and employees
- obligations of employees, including attendance, ethical behaviour, taking directions, confidentiality, work performance, safety and care
- obligations of employers, including safe system of work and non-discrimination
- sources of information on the design industry and ways of maintaining current industry knowledge.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • knowledge of the design industry, design as a profession and the relationship between design and other industries • application of industry knowledge to work activities, maximising effective performance • knowledge of ways to maintain currency in design industry trends and practice.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to sources of information on the design industry.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • oral or written questioning to assess knowledge of different aspects of the design industry.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Information on the design industry</i> should relate to:</p>	<ul style="list-style-type: none"> • different sectors, and products and services available • economic and social significance of the industry • industry structure • prominent design practitioners, companies and practices • relationship between design and allied industries such as: <ul style="list-style-type: none"> • film, television, radio, digital media • journalism • manufacturing • music • photoimaging • retail • scientific/medical • sport • tourism • visual arts and craft
<p><i>Employment obligations and opportunities</i> may relate to:</p>	<ul style="list-style-type: none"> • best practice models • career opportunities • professional associations • roles, responsibilities and employment rights of contracted workers • unions and employer bodies
<p><i>Information on new technology</i> may relate to:</p>	<ul style="list-style-type: none"> • advances in technology and equipment • likely effects of new technology on current work practices and the structure of the industry • sources of technical advice and support • ways of upgrading skills to allow for the use of new technology
<p><i>Opportunities to update</i></p>	<ul style="list-style-type: none"> • conferences, symposiums, workshops, master classes

RANGE STATEMENT	
<i>knowledge of the design industry</i> may relate to:	<ul style="list-style-type: none"> • discussions with industry practitioners and colleagues • exhibitions/events • expositions • industry associations and organisations • industry functions • industry journals • internet • media • personal observations and experience • policy and procedures manuals • reference manuals • seminars and other professional development opportunities • unions and other sources of industrial relations information
<i>Issues of concern</i> to the industry may be related to:	<ul style="list-style-type: none"> • changing nature of the marketplace • convergence • government initiatives • industry expansion • labour issues
<i>Information on ethical and legal work practices</i> may relate to:	<ul style="list-style-type: none"> • contracts • copyright, moral rights and intellectual property issues • legal requirements • permits

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Design - Design Process
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Co-requisite units

Co-requisite units		

BSBDES305A Source and apply information on the history and theory of design

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to source information on design history and theory, and to apply that information to one's own area of work.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who work in design and need to develop and maintain a general knowledge of design history and theory.</p> <p>More complex research into design theory and design trends is covered by BSBDES602A Research global design trends and BSBDES701A Research and apply design theory.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Collect information on history and theory of design	1.1. Identify and access relevant <i>sources of information</i> on design history and theory 1.2. <i>Organise research material</i> and findings for current or future use in design practice, in a manner which facilitates easy access and cross-referencing
2. Apply information to own area of work	2.1. <i>Evaluate information</i> in the context of current design practice 2.2. Assess ways in which aspects of information on design history and theory could be used or adapted to inform current practice 2.3. Use relevant information in a culturally appropriate way to develop an understanding of own area of work
3. Update and maintain knowledge of design trends	3.1. Identify and use opportunities to update and expand knowledge of design trends and developments 3.2. Incorporate and integrate knowledge into design activities

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

The following skills must be assessed as part of this unit:

- research and comprehension skills to source, understand and apply information on design history and theory
- research skills to source readily available information on design history and theory.

Required knowledge

- copyright, moral rights, intellectual property issues and legislation as it relates to using information in own work
- current trends in design
- evolution of design
- organisational information practices and their application
- sources of information on design history and theory relevant to own design work.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • knowledge of the history and theory of design and how this may be applied in design practice • application of research and evaluation skills.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to information sources on design history and theory.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • evaluation of how history and theory have been integrated into a design project undertaken by the candidate • evaluation of a presentation made by the candidate about how design history or theory has influenced work • oral or written questioning to assess knowledge of design history, trends and theory.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Sources of information</i> may include:</p>	<ul style="list-style-type: none"> • cultural, historical, scientific texts • film, video, internet • images, objects • journal articles • oral histories • performances/presentations • philosophical texts • religious and spiritual texts • stories • technical or medium specific information
<p><i>Information</i> may relate to:</p>	<ul style="list-style-type: none"> • aesthetics • criticism • cultural issues • gender and identity issues • histories of art, craft and design • histories of performances/presentations and related skills • land and place • new technologies • politics • spiritual concerns • world histories
<p><i>Organising research material</i> may include:</p>	<ul style="list-style-type: none"> • databases • diagrams, charts • digital storage systems • files, scrapbooks, diaries • mind maps • sketches
<p><i>Evaluating information</i> may include:</p>	<ul style="list-style-type: none"> • comparing • considering merit • contrasting • critiquing

RANGE STATEMENT

	<ul style="list-style-type: none">• discussing and debating• reflecting
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Unit Sector(s)

Unit sector	
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Competency field

Competency field	Design - Design Process
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Co-requisite units

Co-requisite units		

BSBDES401A Generate design solutions

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to generate design solutions in response to a particular design need.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who generate concepts and solutions in response to a design challenge in any industry context. The starting point may be an open or closed brief; a spontaneous idea; modification of an existing product, service, process or system; or a point in an ongoing design process.</p> <p>This unit builds on BSBDES201A Follow a design process, and places greater focus on research, concept generation and collaboration with others as key aspects of the design process.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Define the design challenge	1.1. Determine and evaluate <i>user/client needs</i> 1.2. Clarify <i>specifications, parameters and constraints</i> of the design challenge in consultation with relevant stakeholders 1.3. Articulate the essence of the design challenge in an <i>appropriate format</i>
2. Undertake research to inform the design solution	2.1. Source, evaluate and acknowledge <i>information</i> that may assist in responding to the design challenge 2.2. Consider <i>historical, current and future perspectives and trends</i> that might inform design solutions 2.3. Consider relevant <i>social, economic, environmental, ethical and cultural issues</i> that may impact on design solutions 2.4. Analyse, distil and collate information to inform the development of the design solution
3. Communicate and collaborate with others	3.1. Establish and develop working relationships with <i>key stakeholders</i> 3.2. Seek and integrate input and ideas from others during the design process 3.3. Inform key stakeholders about progress of the design and related implications 3.4. Negotiate and agree on any changed requirements or modifications
4. Generate ideas and responses to the design challenge	4.1. Reflect on and integrate ideas generated from research and consultation 4.2. Use a range of <i>creative thinking techniques</i> to generate different options and ideas 4.3. Apply relevant principles of <i>functionality, ergonomics, aesthetics and sustainability</i> to the development of different options
5. Select a design solution	5.1. Develop and use a range of <i>criteria against which to evaluate different options and ideas</i> 5.2. Select a preferred solution against agreed criteria and in consultation with relevant key stakeholders 5.3. Adjust and refine proposed design solution based on research, testing and reflection 5.4. Present proposed design solution with appropriate <i>supporting documentation</i> according to project

ELEMENT	PERFORMANCE CRITERIA
	requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to liaise, consult and negotiate with others on potentially complex issues
- creative, critical thinking and problem-solving skills to generate a range of ideas and solutions to a particular design challenge
- research skills to interpret and develop a wide range of visual and written information sources
- planning and organisational skills to collate information, and to coordinate liaison and consultation with others during the design process.

Required knowledge

- copyright, moral rights and intellectual property issues and legislation that impact on design in the relevant context
- elements and principles of design and their application in the relevant design context
- features of the wider industry, economic, social and historical context in which design solutions are being generated
- other designs and the work of other design practitioners in the relevant context
- sources of information that support the development of technical and other knowledge
- technical knowledge of the area for which design solutions are being generated - in terms of materials, tools, equipment, techniques and industry processes and procedures.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • development of a design solution through research, reflection and the generation and refinement of ideas • effective collaboration with others in the design process • knowledge of design trends and technologies in the relevant industry context.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • interaction with others to reflect the collaborative nature of the design process • access to sources of information on design in the relevant industry context.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • evaluation of a design solution generated by the candidate against an original brief, set of criteria or guiding objectives • evaluation of the process used to reach a design solution in terms of research and ideas generation/refinement • oral or written questioning to assess knowledge of technical and context issues that impact on design in a given industry context.
Guidance information for assessment	<p>The design process does not occur in isolation. Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.</p> <p>Combined assessment with the following unit is appropriate:</p> <ul style="list-style-type: none"> • BSBCRT301A Develop and extend critical and

EVIDENCE GUIDE	
	creative thinking skills.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>User/client needs</i> may be:	<ul style="list-style-type: none"> • expressed in a brief: <ul style="list-style-type: none"> • diagrammatic • verbal • visual • written • expressed in other documentation such as research papers or workplace plans • informally articulated • in need of further research
<i>Specifications, parameters and constraints</i> may relate to:	<ul style="list-style-type: none"> • audience • budgeting and financing • cost of production • medium • purpose • technical issues • timeframes
<i>Appropriate format</i> may include:	<ul style="list-style-type: none"> • drawings or sketches - manual or computer aided design and drafting (CADD) • electronic presentation • verbal presentation • written notes with rationale or description
<i>Information</i> may include:	<ul style="list-style-type: none"> • codes of practice • contractual obligations • historical data • industry standards • legal requirements • specialist information • technological trends and developments
<i>Historical, current and future perspectives and trends</i> may relate to:	<ul style="list-style-type: none"> • industry context • materials • social or ethical issues • sustainability

RANGE STATEMENT	
	<ul style="list-style-type: none"> • technologies
<i>Social, economic, ethical and cultural issues</i> may include:	<ul style="list-style-type: none"> • availability of materials, tools or equipment • budgetary issues • community impact • cost of production • customer relationships • government policies • sponsorship opportunities • triple bottom line (people, planet, profit) • workforce relationships
<i>Environmental issues</i> may include:	<ul style="list-style-type: none"> • conservation of resources • energy efficiency • environmental consciousness/green design • recycling • use of renewable resources • waste/by products/emissions
<i>Key stakeholders</i> may include:	<ul style="list-style-type: none"> • client • employer • end user • peers • supervisor • technical experts • work colleagues
<i>Creative thinking techniques</i> may include:	<ul style="list-style-type: none"> • brainstorming: <ul style="list-style-type: none"> • bulletin board • buzz session • computer-aided • sequencing • stop and go • daydreaming and mental wandering • Edward de Bono's six thinking hats • ego alter or heroes • graphic organisers: <ul style="list-style-type: none"> • concept fans • visual maps • webbing • lateral thinking games • making associations • mind mapping

RANGE STATEMENT	
	<ul style="list-style-type: none"> • morphological analysis • storytelling • sub-culture surfing • trigger words • use of metaphors and analogies • vision circles • visualisation • wishful thinking • word salads
<i>Functionality, ergonomics, aesthetics and sustainability</i> may be related to:	<ul style="list-style-type: none"> • end use and users • production processes
<i>Criteria against which to evaluate different options and ideas</i> may relate to:	<ul style="list-style-type: none"> • access to resources - physical, human or financial • aesthetic appeal • consistency with original brief • desired level of originality and innovation • ease of manufacture or further development • environmental sustainability • ethical issues • health and safety requirements • impact upon client and community • industry standards and practice • legal issues • level of risk • personal affinity with medium and materials • technological considerations
<i>Supporting documentation</i> may include:	<ul style="list-style-type: none"> • drawings or plans • illustrations • material samples • models • photographs • specifications for production

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Design - Design Process
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Co-requisite units

Co-requisite units		

BSBDES403A Develop and extend design skills and practice

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to develop and extend skills as a practising designer.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to any individual who works as a designer in any industry context. Designers may work independently or be employed by an organisation.</p> <p>Designers must continually refine, develop and evaluate their own conceptual and technical skills. Research, experimentation and collaboration are key factors in this process.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Acquire and develop technical skills	1.1. Plan <i>strategies</i> to ensure the development of appropriate <i>technical skills</i> in design practice 1.2. Plan and use opportunities to develop and assess technical skills 1.3. Identify and use practice, feedback, discussion and evaluation opportunities to continuously improve technical skills 1.4. Develop and extend technical skills through <i>testing capabilities</i> of materials, tools and equipment 1.5. Identify and use <i>relevant media</i> to stimulate technical and professional development
2. Develop conceptual skills and ideas	2.1. Engage in ongoing experimentation and exploration of different ideas and techniques 2.2. Discuss ideas with others and apply knowledge gained to inform own work 2.3. Use work practice to gain experience in a range of genres and interpretations 2.4. Study the work of others to stimulate conceptual and technical skills development 2.5. Research and share ideas across a range of design disciplines 2.6. Identify and use a range of <i>opportunities to develop own skills</i> and keep informed about current design practice
3. Develop own voice	3.1. Explore and experiment with new ideas in making and/or interpreting design work 3.2. Explore and use technology, where appropriate, to develop <i>own voice</i> and expand practice 3.3. Demonstrate own voice through design project realisation
4. Evaluate own work	4.1. Seek and apply constructive criticism from others to improve own work 4.2. Evaluate own work against planned strategy for own practice 4.3. Evaluate own work in the context of work by others in order to extend own practice 4.4. Adjust work processes and practice as necessary to improve technical, conceptual and commercial outcomes

ELEMENT	PERFORMANCE CRITERIA
5. Research work opportunities	5.1. Correctly identify <i>sources of information</i> relating to work opportunities for designers 5.2. Identify <i>networks</i> and <i>promotional opportunities</i> for designers which may be helpful in developing career opportunities 5.3. Incorporate research results and information into own work and career planning

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to discuss potentially complex ideas and concepts with others and to engage in critical discourse about own work
- creative thinking skills to explore and generate new ideas for design work
- comprehension skills to interpret and communicate a wide range of potentially complex information about design concepts and technologies
- problem-solving skills to explore and develop strategies and solutions to new design challenges and opportunities
- self-management skills to take pro-active responsibility for own professional development.

Required knowledge

- current and emerging copyright, moral rights and intellectual property issues and legislation, and their impact on designers
- current and emerging designers in the relevant design discipline
- current and emerging trends and technologies in the relevant design discipline, and the opportunities and challenges they represent
- professional development information and resources available to designers
- sources of information relating to work opportunities and career planning.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • development of own voice through exploring and experimenting with new ideas in making and/or interpreting work • application of planned strategies to develop appropriate skills in design practice • use of discussion and evaluation opportunities to inform and develop technical and conceptual skills.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to the materials, resources and equipment used in the development of technical and conceptual skills in the relevant design context.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • evaluation of candidate diary or log detailing the ways in which different experiences and opportunities have been used to develop and extend skills • evaluation of bodies of work that demonstrate the progressive development of skills • evaluation of a presentation by the candidate addressing the ways in which a pro-active approach to skills development has been taken.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Strategies for developing self as a designer may include:

- being involved in a range of relevant design activities
- communicating with peers
- experimenting
- participating in professional development and other learning opportunities
- participating in relevant groups or associations
- practising
- undertaking training courses
- working effectively with supervisor
- working with a mentor or coach

Technical skills may include skills in:

- animation
- digital/electronic design
- entertainment design
- fashion/clothing/accessories design
- furnishings
- furniture design
- graphic design
- illustration/technical drawing
- interior design
- jewellery design
- object design
- photoimaging
- tableware design
- other design disciplines

Testing capabilities refers to:

- experimenting with innovative applications
- extending the possibilities of materials, tools and equipment towards their full potential

Relevant media may include:

- catalogues
- journals
- magazines

Opportunities to develop own

- competitions

RANGE STATEMENT	
<i>skills</i> may include participation in and/or attendance at, some of the following:	<ul style="list-style-type: none"> • exhibitions • floor talks at galleries • laboratories • lectures, seminars, conferences, symposiums • manufacturing sites • master classes • professional organisations • trade fairs, expositions
Developing <i>own voice</i> includes:	<ul style="list-style-type: none"> • analysing and researching the work of others relevant to selected area of specialisation • analysing conventions, practices and customs in design practice • developing repertoire and knowledge • exploring elements and principles of design
<i>Sources of information</i> may include:	<ul style="list-style-type: none"> • design journals • employer listings • exhibition catalogues and programs • job advertisements • websites • word of mouth
<i>Networks</i> may include:	<ul style="list-style-type: none"> • alumni organisations • colleagues and teachers • consumer organisations • professional associations
<i>Promotional opportunities</i> may include:	<ul style="list-style-type: none"> • applications to funding bodies • competitions • demonstrations • exhibitions • performances • trade fairs

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Design - Design Process
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Co-requisite units

Co-requisite units		

BSBDES502A Establish, negotiate and refine a design brief

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to work pro actively with a client or commissioning organisation to develop and negotiate a design brief.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals working in any industry or design context where the designer plays a key role in determining the scope and nature of work required. This unit builds on BSBDES402A Interpret and respond to a design brief, which focuses on working with an established brief.</p> <p>Establishment, negotiation and refinement of a design brief requires the integration of highly developed creative thinking, communication and planning skills in a process that may not be linear. Adaptability and effective response to change and new ideas is crucial.</p> <p>In practice, this unit supports and is supported by other units describing the specialist skills and knowledge required by specific design disciplines.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish design requirements	1.1. Identify and make appropriate contact with relevant stakeholders for the design project, in addition to the client 1.2. Identify and source information and references relevant to the design project 1.3. Undertake critical analysis of sources and extract key information to inform the design project 1.4. Liaise with client and other key stakeholders to determine overall objectives and parameters for the design project 1.5. Pro-actively seek, review and act upon information needed to inform constructive communication with client 1.6. Build trust and respect between self and client through effective use of communication skills and demonstration of professional integrity
2. Develop and refine design brief	2.1. Develop concepts and ideas for inclusion in design brief that take account of overall objectives and parameters 2.2. Undertake own analysis of concept and challenge ideas and approaches taken to ensure responsiveness to project needs 2.3. Present ideas in an appropriate format/medium and seek feedback from key stakeholders 2.4. Use effective communication techniques to generate discussion, debate and critical analysis 2.5. Re-evaluate and refine options based on own analysis and discourse with others 2.6. Establish and agree on final nature and scope of design brief with client and accurately document details
3. Negotiate terms and conditions	3.1. Negotiate and agree terms and conditions of the brief in accordance with relevant organisational and professional standards 3.2. Clarify, agree and document roles and responsibilities of those involved in the project 3.3. Confirm agreements in writing in accordance with organisational requirements 3.4. Identify the need for and seek specialist advice in developing, formal agreements or contracts where

ELEMENT	PERFORMANCE CRITERIA
	appropriate

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication, presentation and negotiation skills to work with clients to establish and refine design briefs
- creative thinking skills to generate and develop concepts and ideas for the design brief, including responses to situations where parameters may be quite broad and open or very restrictive
- literacy skills to research and evaluate a wide range of source materials for the development of ideas and concepts
- numeracy skills to develop realistic costings for realisation of design concept
- planning and organisational skills to guide and coordinate the process of negotiating and finalising a design brief
- problem-solving skills to pro-actively identify and develop effective solutions to complex challenges of a varied and unpredictable nature
- self-management skills to take responsibility for driving and guiding the brief negotiation process.

Required knowledge

- copyright, moral rights and intellectual property issues and legislation that impact on design in the relevant work context
- legal issues that affect negotiations and contracts in the relevant work context
- scope, nature and potential variations within design briefs relevant to a specific context
- sources of information that inform the development of design concepts within a specific industry context.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • practical demonstration of skills through the development and finalisation of at least two design briefs for a specific industry purpose • effective collaboration and communication skills to work with others to develop and refine a design brief • knowledge of the design process within the specific industry context/design discipline.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to appropriate equipment and media to communicate and present ideas and concepts • access to sources of information relevant to the industry context • interaction with and involvement of others to reflect the collaborative nature of the work, and the communication and negotiation skills required.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • evaluation of a design brief in which the candidate has played a significant development role • evaluation of reports prepared by the candidate detailing the processes undertaken for establishing and refining the design brief, including challenges faced and lessons learned for the future • observation of discussions and negotiations with client and other stakeholders • oral or written questioning to assess knowledge of the process and issues surrounding legislation, industry context, sources of information • evaluation of candidate response to different

EVIDENCE GUIDE	
	scenarios to assess ability to adapt approach to different client requirements and contexts.
Guidance information for assessment	<p>The design process does not occur in isolation. Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none">• any specialised design unit.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Relevant stakeholders</i> in addition to the client may include:</p>	<ul style="list-style-type: none"> • authorities such as local council for outdoor event design • creative specialists • other designers • others involved in the project • production teams • technical specialists • venue managers
<p><i>Information and references relevant to the design project</i> may include:</p>	<ul style="list-style-type: none"> • environment • financial information • legislative and regulatory requirements • music and/or film/video • oral history • organisational information • photographs and other artworks • project team members • promotional material • technical reports/data • texts and other written references • work of other designers/artists
<p><i>Critical analysis</i> may involve:</p>	<ul style="list-style-type: none"> • considering how ideas may be adapted • considering how ideas may be challenged • drawing links between references and potential designs • evaluating work of other designers • making judgements about potential ideas in relation to the budget and available resources • making judgements about relevance of information and ideas
<p><i>Overall objectives and parameters</i> may relate to:</p>	<ul style="list-style-type: none"> • audience • availability of materials, tools, equipment and human resources • budget constraints

RANGE STATEMENT	
	<ul style="list-style-type: none"> • conflicting competing demands • environmental sustainability • organisational vision • presentation venue/context • sponsorship • timeframe • triple bottom line (people, planet, profit)
<i>Appropriate format/medium</i> for presentation of ideas may include:	<ul style="list-style-type: none"> • checklists • digital presentation • drawings • electronic presentations • graphic formats • models • paintings • photographs • plans • prototypes • verbal description/oral presentation • video • visual diagrams
<i>Terms and conditions</i> may relate to:	<ul style="list-style-type: none"> • conceptual parameters • contracts • deliverables • legal and financial issues such as processes to be used • ownership and copyright • reporting • technical requirements • time lines
<i>Organisational and professional standards</i> may include:	<ul style="list-style-type: none"> • industry-accepted fee schedules • industry standards for written agreements • requirements for written agreements
<i>Organisational requirements</i> for confirming agreements may include:	<ul style="list-style-type: none"> • approval and ongoing communication processes

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Design - Design Process
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Co-requisite units

Co-requisite units		

BSBDES601A Manage design realisation

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to manage the process of taking a design from concept to final realisation or production.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals working in any industry context or design discipline who take responsibility for turning design concept into reality - a product or service of value to the end user. This person could be an individual designer-maker or a designer working as part of a larger design/production team.</p> <p>The unit has a strong focus on planning, implementation and monitoring skills, combined with a sound knowledge of design and production issues and challenges in a given context.</p> <p>In practice this unit supports and is supported by other units describing the specialist skills and knowledge required by specific design disciplines.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan realisation of the design	1.1. Collect, analyse and maintain relevant information on the design 1.2. Discuss and agree on standards of work and monitoring requirements with appropriate stakeholders 1.3. Develop clear plan and schedule for design realisation, including key roles and responsibilities linked to time lines and budget
2. Implement and monitor realisation of the design	2.1. Organise and/or allocate resources to achieve the realisation of design within required standards, timeframes and budget 2.2. Liaise with others involved in design realisation to ensure obligations and quality standards are met within time, budget and technical resources 2.3. Maintain accurate, relevant and complete documentation in accordance with agreed standards 2.4. Monitor process to ensure integrity of design is maintained at all times, including through the process of challenging and interrogating own design work 2.5. Promptly identify difficulties or problems that arise in relation to realisation of the design and take action to rectify the situation
3. Liaise and negotiate with stakeholders	3.1. Establish and maintain appropriate communication channels with relevant stakeholders 3.2. Pro-actively seek and provide information to facilitate effective design realisation 3.3. Adhere to agreed terms and conditions or negotiate appropriate changes in light of changed circumstances 3.4. Negotiate and agree on revisions with relevant parties in a professional manner, to enhance quality of outcome
4. Complete design process	4.1. Finalise design outcomes in accordance with terms and conditions 4.2. Seek feedback from key stakeholders on finished design and make final adjustments as agreed 4.3. Evaluate completed design in relation to own work and overall process, to inform future practice

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication and negotiation skills to lead and participate in effective client/principal, stakeholder and project team liaison during design realisation
- creative thinking skills to generate new or adapted ideas in response to realisation challenges
- literacy skills to research and evaluate a wide range of source materials on design and to complete relevant design documentation
- numeracy skills to manage budgets
- planning and organisational skills to coordinate and lead potentially complex processes involving a range of interrelated factors and challenges
- problem-solving and decision making skills to develop and implement solutions to unpredictable problems.

Required knowledge

- copyright, moral rights, intellectual property issues and legislation that impact on design work in the relevant industry context at a managerial level
- occupational health and safety requirements relevant to the particular work context/design discipline
- production/realisation processes as they apply to designs in a particular industry context or design discipline including materials, tools, equipment and processes
- quality assurance for design concept realisation applicable to the specific industry context/design discipline.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • planning and implementation of design realisation so that finished product or service meets the requirements of design brief • effective communication and negotiation skills in relation to working with others for design realisation • knowledge of the design process in the specific industry context/design discipline.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to resources, tools, materials and equipment for realisation of a design in specific context • access to a design concept that the candidate can take to realisation stage • interaction with and involvement of others to reflect the collaborative nature of the unit and the communication and negotiation skills required.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • evaluation of finished products or services where the candidate has managed the realisation process • evaluation of progress reports or completion reports prepared by the candidate • evaluation of candidate reports on the realisation process highlighting different management techniques used, challenges in the process and how these were addressed.
Guidance information for assessment	<p>The design process does not occur in isolation. Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p>

EVIDENCE GUIDE

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| | <ul style="list-style-type: none">• any specialised design unit. |
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Relevant information on the design</i> may include:</p>	<ul style="list-style-type: none"> • artwork • brief • checklists • financial data • models • production data • prototypes • specifications • technical data • visual diagrams • working drawings
<p><i>Standards of work and monitoring requirements</i> may relate to:</p>	<ul style="list-style-type: none"> • budget targets • creative issues • legal issues • reporting requirements • technical quality • timeframes
<p><i>Appropriate stakeholders</i> may include:</p>	<ul style="list-style-type: none"> • client • community • others on whom the design will impact, for example technical or production personnel • others working on the design realisation process • supervisor/manager
<p><i>Resources</i> may include:</p>	<ul style="list-style-type: none"> • financial • human • physical
<p><i>Documentation</i> to be maintained may include:</p>	<ul style="list-style-type: none"> • digital records and presentations • financial reports • models • photographs • progress reports

RANGE STATEMENT	
	<ul style="list-style-type: none"> • prototypes • records of work • working drawings
<i>Difficulties or problems</i> may relate to:	<ul style="list-style-type: none"> • budgetary overruns • conceptual issues • legal issues • scheduling problems • technical quality
<i>Communication channels</i> may include:	<ul style="list-style-type: none"> • electronic updates • inspections • project meetings • telephone discussions

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Design - Design Process
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Co-requisite units

Co-requisite units		

BSBDES602A Research global design trends

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to research and critically evaluate global design trends.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who need to maintain a current and comprehensive knowledge of global design trends to inform their own professional practice. Often the individual would be a designer, but the unit may also be relevant to those who work in related management, marketing and production areas.</p> <p>The unit focuses on research and analysis of information and ideas at a complex level, plus the evaluation and extension of one's own professional skills.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Research design trends	1.1. Analyse and select <i>formal and informal research strategies</i> to source <i>information on global design trends</i> 1.2. Identify and explore <i>new and alternative sources</i> 1.3. Evaluate the credibility of information gathered and ensure research scope is sufficiently broad
2. Analyse design trends to inform own practice	2.1. Use information to challenge and extend own perspectives and ways of thinking 2.2. Examine and assess the implications and consequences of design trends on own work 2.3. Use <i>critical analysis</i> to identify creative or commercial opportunities presented by emerging trends and technologies 2.4. Develop systems to identify and respond to future opportunities
3. Develop and articulate positions and ideas	3.1. Develop <i>substantiated positions and ideas</i> in relation to global design trends 3.2. Generate informed discussion, debate and critical analysis with peers and colleagues 3.3. Use debate and feedback as a way of challenging and refining own positions
4. Extend own design skills	4.1. Pro-actively identify and use opportunities presented by research to extend own design skills 4.2. Re-evaluate and refine approaches to work in the context of current and emerging trends 4.3. Use practice, discussion and ongoing evaluation to continuously improve skills

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to articulate and debate conceptual or technical ideas
- critical thinking skills to distil and synthesise information from varied sources and to develop own positions and ideas on a complex range of issues
- literacy skills to research complex, varied and unfamiliar information sources
- planning and organisational skills to undertake the research process.

Required knowledge

- broad global design trends that apply to all design disciplines
- business implications/consequences of adopting trends and emergent technologies
- copyright/moral/intellectual property issues associated with research and with design more broadly
- design industry networks and professional development opportunities - local, national and international
- research methodologies and options
- sources of information on global design, design trends and broader references that may inform emerging and innovative design practice
- specific current and emerging design technologies and trends (at a global level) in at least one area of design.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> conducting research on a complex range of design issues, trends and ideas analysing, critiquing and synthesising complex sources to develop own positions and ideas design research knowledge of copyright/moral/intellectual property issues associated with research and with design more broadly.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> use of a current and varied range of familiar and unfamiliar information sources.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate evaluation of research undertaken by the candidate in terms of scope, depth and the level of critical thinking applied direct observation of candidate debating issues arising from research into global design trends oral or written questioning to assess knowledge of global design trends in terms of depth and complexity.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Formal and informal research strategies</i> may include:</p>	<ul style="list-style-type: none"> • formal study • participating actively in relevant industry associations • participating in, and contributing to, discussion through conferences, meetings, seminars, courses and journals • participating in professional development and other learning opportunities • reading current literature, including specialist journals and industry magazines • web research
<p><i>Information on global design trends</i> may relate to:</p>	<ul style="list-style-type: none"> • best practice examples • emerging and future technology • history • philosophy • role of design in the broader social, economic and political environment • sustainability
<p><i>New and alternative sources</i> may include:</p>	<ul style="list-style-type: none"> • inspirations from nature • work from other areas of community or business activity for example: <ul style="list-style-type: none"> • artists • authors • business people • entertainers • film makers • historians • philosophers • photographers • scientists
<p><i>Critical analysis</i> may include:</p>	<ul style="list-style-type: none"> • analysing and evaluating actions and policies • clarifying issues, values and standards

RANGE STATEMENT	
	<ul style="list-style-type: none"> • comparing analogous situations • comparing and contrasting ideals with practice • comparing and evaluating beliefs, interpretations and theories • developing criteria for evaluation • distinguishing relevant from irrelevant facts • examining and evaluating assumptions • exploring implications and consequences • generating and assessing solutions • making interdisciplinary connections • making plausible inferences and predictions • noting significant similarities and differences • reading and listening critically
<i>Substantiated positions and ideas</i> may be those which are:	<ul style="list-style-type: none"> • grounded in appropriate research • result of rational and logical thought • subjected to the analysis of others • supported by relevant information

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Design - Design Process
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Co-requisite units

Co-requisite units	

BSBFIA301A Maintain financial records

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to maintain financial records for a business. It includes maintaining daily financial records such as reconciling debtors' and creditors' systems, preparing and maintaining a general ledger, and preparing a trial balance. It also includes activities associated with monitoring cash control for accounting purposes.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who are skilled operators and apply a broad range of competencies in various work contexts. They may exercise discretion and judgement using appropriate theoretical knowledge of financial records to provide technical advice and support to a team.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Maintain daily financial records	1.1. Correctly maintain daily financial records and in accordance with <i>organisational requirements</i> for accounting purposes 1.2. Identify and rectify or refer <i>discrepancies</i> or errors in <i>documentation</i> or transactions to <i>designated persons</i> in accordance with organisational requirements 1.3. Accurately credit and debit transactions and promptly enter into <i>journals</i> in accordance with organisational requirements
2. Maintain general ledger	2.1. Maintain general ledger in accordance with organisational requirements 2.2. Post <i>transactions</i> into general ledger in accordance with organisational reporting requirements 2.3. <i>Reconcile systems for accounts payable and receivable</i> with general ledger 2.4. Accurately prepare trial balance from general ledger in accordance with organisational requirements
3. Monitor cash control	3.1. Ensure cash flow is accurately accounted for in accordance with organisational requirements 3.2. Make and receive <i>payments</i> in accordance with organisational requirements 3.3. Collect or follow-up outstanding accounts within designated time lines 3.4. Check payment documentation for accuracy of information and despatch to creditors within <i>designated time line</i>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to identify financial information; to read and understand the organisation's accounting procedures; and to edit and proofread documents to ensure conformity and consistency of information
- communication skills to clarify information and to refer errors or discrepancies to appropriate people
- numeracy skills to read and interpret financial data and to prepare cash analysis sheets
- problem-solving skills to reconcile figures.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - financial legislation
 - occupational health and safety (OHS)
- organisational policies and procedures relating to maintaining financial records
- definition of credits/creditors and debits/debtors
- principles of double entry bookkeeping and accrual accounting
- methods of presenting financial data.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • identifying and responding to discrepancies and errors • transferring and recording financial data accurately • reconciling expenditures and revenue • knowledge of organisational policies and procedures relating to maintaining financial records.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of source documents relating to financial record keeping.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of identification and rectification or referral of discrepancies or errors in documentation or transactions • analysis of responses to case studies and scenarios • demonstration of techniques • oral or written questioning to assess knowledge of financial record keeping • examples of financial documentation.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • general administration units • other financial administration units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Organisational requirements</i> may include:	<ul style="list-style-type: none"> • designated time lines • guidelines for reconciling journals • legal and organisational policies, guidelines and requirements • OHS policies, procedures and programs • procedures for totalling adjusted journals • quality assurance and/or procedures manuals • resolution procedures • security procedures
<i>Discrepancies</i> may relate to:	<ul style="list-style-type: none"> • bank charges • dishonoured cheques • errors in transposing between source documents and journals • interest
<i>Documentation</i> may include:	<ul style="list-style-type: none"> • purchase credit notes • purchase invoices • sales credit notes • sales invoices
<i>Designated persons</i> may include:	<ul style="list-style-type: none"> • bank • line management • organisation's authorisations department • statutory body • supervisor
<i>Journals</i> may include:	<ul style="list-style-type: none"> • cash payments • cash receipts • purchases and purchase returns • sales and sales returns
<i>Transactions</i> may include:	<ul style="list-style-type: none"> • commencing business entries • correction of posting errors • interest expense • interest receivable • non-cash transactions (e.g. writing-off

RANGE STATEMENT	
	depreciation, stock losses) <ul style="list-style-type: none"> • purchase of a fixed asset on credit • sale of a fixed asset on credit • withdrawal of stock/assets by owner • write-off a bad debt
<i>Reconciling systems for accounts payable and receivable</i> may include:	<ul style="list-style-type: none"> • checking accuracy of creditor account balances (e.g. cash payments journal, purchases journal, purchases returns journal, general journal) • checking accuracy of debtor account balances (e.g. cash receipts journal, sales return journal, general journal) • checking cash payments and receipt journals against bank statement • checking the total of the creditor's schedule equals the balance of the creditor's control account • checking the total of the debtor's schedule equals the balance of the debtor's control account
<i>Payments</i> may include:	<ul style="list-style-type: none"> • cash • cheque • credit card • direct debit
<i>Designated time lines</i> may include:	<ul style="list-style-type: none"> • by month end • monthly • within agreed period • within organisational deadline

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Finance - Financial Administration
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Co-requisite units

Co-requisite units		

BSBFLM309C Support continuous improvement systems and processes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit specifies the outcomes required to support the organisation's continuous improvement systems and processes. Particular emphasis is on actively encouraging the team to participate in the process, on monitoring and reporting on specified outcomes and on supporting opportunities for further improvements.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

<p>Application of the unit</p>	<p>This unit replaces BSBFLM309A Support continuous improvement systems and processes.</p> <p>Frontline managers have an active role in supporting continuous improvement processes in achieving the organisation's objectives. Their position, closely associated with the creation and delivery of products and services, means that they have an important responsibility in influencing the ongoing development of the organisation.</p> <p>At this level, work will normally be carried out within known routines, methods and procedures, and may also involve a number of complex or non-routine activities that require some discretion and judgement.</p> <p>Consider co-assessment with BSBFLM305C Support operational plan, BSBFLM312C Contribute to team effectiveness, BSBCUS301A Deliver and monitor a service to customers, BSBCMN311B Maintain workplace safety, and BSBFLM311C Support a workplace learning environment.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

<p>Prerequisite units</p>		

Employability Skills Information

<p>Employability skills</p>	<p>This unit contains employability skills.</p>
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Contribute to continuous improvement systems and processes	<p>1.1. Actively encourage and support team members to participate in decision making processes and to assume responsibility and exercise initiative</p> <p>1.2. <i>Communicate</i> the organisation's <i>continuous improvement processes</i> to individuals and teams</p> <p>1.3. Effectively utilise <i>mentoring and coaching</i> to ensure that individuals/teams are able to support the organisation's continuous improvement processes</p>
2. Monitor and report on specified outcomes	<p>2.1. Utilise the organisation's <i>systems</i> and <i>technology</i> to monitor team progress and to identify ways in which planning and operations could be improved</p> <p>2.2. Apply continuous improvement techniques and processes to improve <i>customer service</i></p>
3. Support opportunities for further improvement	<p>3.1. Communicate <i>agreed recommendations</i> for improvements in achieving the business plan to team members</p> <p>3.2. Document and use work performance to identify opportunities for further improvement</p> <p>3.3. Maintain records, reports and recommendations for improvement within the organisation's systems and processes</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- ability to relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities
- functional literacy skills to access and use workplace information
- research, analysis, interpretation and reporting skills
- monitoring and evaluation skills
- communication skills to:
 - gain the commitment of individuals and teams to continuous improvement
 - deal with people openly and fairly
 - use consultation skills effectively
- skills to consolidate opportunities for improvement
- coaching and mentoring skills to provide support to colleagues

Required knowledge

- legislation from all levels of government that affects business operation, especially in regard to occupational health and safety and environmental issues, equal opportunity, industrial relations and anti-discrimination
- principles and techniques of:
 - continuous improvement systems and processes
 - benchmarking
 - best practice
- benefits of continuous improvement
- quality approaches which the organisation may implement
- methods that can be used in continuous improvement
- barriers to continuous improvement
- recording, reporting and recommendation processes to facilitate continuous improvement applied within the organisation

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • examples of actions taken by the candidate to support continuous improvement including: • use of work performance to identify improvement • adjusted plans to reflect changes • effective communication to all stakeholders • use of technology to monitor operational progress • application of suitable recordkeeping processes.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access by the learner and trainer to appropriate documentation and resources normally used in the workplace • that this unit is assessed in the workplace or in a closely simulated work environment.
Method of assessment	<p>A range of assessment methods should be used to assess skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • Direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • Review of records supporting the organisation's continuous improvement systems and processes, such as: <ul style="list-style-type: none"> • contributions to organisational policies and procedures • contributions to procedures and policies for dealing with continuous improvement processes, and related codes of conduct • actions taken to address information collection, retrieval and use in the workplace • actions taken to address issues and problems within work team • actions taken to address methods of reporting

EVIDENCE GUIDE	
	<p>information</p> <ul style="list-style-type: none"> • learning and development plans for team members • materials developed for coaching, mentoring and training • induction programs developed and/or delivered • actions taken to address internal and external information management issues • reviews of people management • advice and input into management decisions related to continuous improvement • records of people management lessons learned.
Guidance information for assessment	<p>This unit should be assessed with other frontline management units taken as part of this qualification, as applicable to the candidate's leadership role in a work team, and as part of a holistic assessment activity.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Legislation, codes and national standards relevant to the workplace may include:	<ul style="list-style-type: none"> • award and enterprise agreements and relevant industrial instruments • relevant legislation from all levels of government that affects business operation, especially in regard to occupational health and safety (OHS) and environmental issues, equal opportunity, industrial relations and anti-discrimination • relevant industry codes of practice.
<i>OHS considerations</i> may include:	<ul style="list-style-type: none"> • provision of information about OHS legislative requirements and guidelines, and the organisation's OHS policies, procedures and programs • participation in the regular update of OHS systems and procedures • implementation of the continuous improvement processes of the OHS management system • changes to work practices, procedures and the working environment which impact on OHS • organisation's responsibilities to customers and suppliers.
Methods used to <i>communicate</i> with individuals and team may include:	<ul style="list-style-type: none"> • verbal, written or electronic communications • on-the-job mentoring and coaching.
<i>Continuous improvement processes</i> may include:	<ul style="list-style-type: none"> • policies and procedures which allow an organisation to systematically review and improve the quality of its products, services and procedures • cyclical audits and reviews of workplace, team and individual performance • seeking and considering feedback from a range of stakeholders • modifications and improvements to systems,

RANGE STATEMENT	
	<p>processes, services and products</p> <ul style="list-style-type: none"> • evaluations and monitoring of effectiveness.
<i>Mentoring and coaching</i> may refer to:	<ul style="list-style-type: none"> • teaching another member of the team, usually focusing on a specific work task or skill • providing feedback, support and encouragement on a range of matters • providing assistance with problem solving.
<i>Systems</i> may include:	<ul style="list-style-type: none"> • organisation policies and procedures • web based communication devices • attendance at forums, meetings • newsletters and reports.
<i>Technology</i> may include:	<ul style="list-style-type: none"> • computerised systems and software such as databases, project management and word-processing • telecommunications devices • any other technology used to carry out work roles and responsibilities.
<i>Customer service</i> may be:	<ul style="list-style-type: none"> • internal or external, to existing or new clients • identifying needs and priorities in delivering a service to customers • understanding of different levels of customer satisfaction.
<i>Agreed recommendations</i> may be:	<ul style="list-style-type: none"> • identified improvements arising from the continuous improvement process • determined in accordance with organisational policies and procedures

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and leadership - Frontline Management
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Co-requisite units

Co-requisite units		

BSBINM601A Manage knowledge and information

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to develop and maintain information processing systems to support decision making, and to optimise the use of knowledge and learning throughout the organisation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to people working in management roles who have responsibility for ensuring that critical knowledge and information are readily available to review the organisation's performance and to ensure its effective functioning. Knowledge and information can include business performance data, customer feedback, statistical data and financial data.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Obtain information relevant to business issues	1.1. Review staff and customer feedback and business performance data 1.2. Identify, define and analyse business problems and issues 1.3. Identify information required to reach a decision on problems/issues 1.4. Source and gather reliable information 1.5. Test information for reliability and validity, and reject where contradictory or ambiguous 1.6. Utilise formal and informal networks to access corporate knowledge/memory not held in formal systems and review appropriately
2. Analyse information and knowledge	2.1. Ensure objectives for analyses are clear, relevant and consistent with the decisions required 2.2. Identify patterns and emerging trends correctly and interpret as to cause and effect 2.3. Utilise <i>statistical analyses</i> and interpretation where appropriate 2.4. Undertake <i>sensitivity analysis</i> on any proposed options 2.5. Ensure documentation reflects a logical approach to the evaluation of the evidence and conclusions drawn 2.6. Adjust <i>management information systems/decision support systems</i> to meet information processing objectives
3. Take decisions on business issues identified	3.1. Ensure sufficient valid and reliable information/evidence is available to support a decision 3.2. Utilise <i>risk management</i> plans to determine acceptable courses of action 3.3. Utilise appropriate <i>quantitative methods</i> to assist decision making 3.4. Consult specialists and other <i>relevant groups and individuals</i> 3.5. Ensure decisions taken are within the delegation/accountability of the group/individual responsible 3.6. Make decisions in accordance with organisational guidelines and procedures

ELEMENT	PERFORMANCE CRITERIA
	3.7.Ensure decisions taken are consistent with organisational objectives, values and standards 3.8.Ensure decisions are taken in a timely manner
4. Disseminate information to the organisation	4.1.Ensure advice/information needs are documented and are specific to location, format and time line requirements 4.2.Document information and update databases regularly 4.3.Design and test systems to meet information requirements of decision makers 4.4.Ensure information is up-to-date, accurate, relevant and sufficient for the recipient 4.5.Develop <i>communication plans</i> and disseminate information 4.6.Adhere to confidentiality/privacy policies in the transmission/release of information/advice 4.7.Review and update communication plans regularly 4.8.Utilise <i>technology</i> which provides optimum efficiency and quality 4.9.Maintain <i>corporate knowledge</i> and ensure security

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to identify improvement opportunities in relation to the services/products delivered internally or concepts/ideas in area of expertise
- communication and consultation skills to ensure all relevant groups and individuals are advised of what is occurring and are provided with an opportunity for input
- quantitative and qualitative research skills to locate and review relevant data and information
- technology skills to consider various software and hardware options for storing and accessing data and information.

Required knowledge

- new technologies and their suitability to knowledge and information management
- risk management.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> documentation which tracks a particular problem/issue through information gathering and analysis, decision making and taking, and dissemination to relevant groups and individuals development and utilisation of relevant information storage and retrieval systems, as well as accessing informal knowledge and information from informal networks within the organisation knowledge of new technologies and their suitability to knowledge and information management.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to appropriate documentation and resources normally used in the workplace.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> assessment of written reports on knowledge management and information management direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate oral or written questioning to assess knowledge of information management systems review of documentation identifying, defining and analysing business problems and issues evaluation of communication plans evaluation of the transmission/release of information/advice in terms of adhering to confidentiality/privacy policies.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> other units from the Advanced Diploma of

EVIDENCE GUIDE	
	Management.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>Statistical analyses</i> may include:	<ul style="list-style-type: none"> • correlation calculations • long-term trend analyses • probability assessment • regulation analyses • short to medium-term trend analyses
<i>Sensitivity analyses</i> means:	<ul style="list-style-type: none"> • applying 'what if' scenarios to available options
<i>Management information systems</i> means:	<ul style="list-style-type: none"> • formal systems for collecting, storing and synthesising information to be used in management decision making
<i>Decision support systems</i> are:	<ul style="list-style-type: none"> • management information systems which include some form of computer-based assistance to decision making (expert systems)
<i>Risk management</i> means:	<ul style="list-style-type: none"> • process of identification of potential negative events and the development of plans to mitigate or minimise the likelihood or consequences of the negative event if it occurs
<i>Quantitative methods</i> may include:	<ul style="list-style-type: none"> • dynamic programming • linear programming • queuing theory • simulation • transportation methodology
<i>Relevant groups and individuals</i> means:	<ul style="list-style-type: none"> • those personnel who have knowledge about the issue being dealt with and the expertise to assist the decision making process
<i>Research</i> may include:	<ul style="list-style-type: none"> • focus groups • group interviews • individual interviews • surveys
<i>Communication plans</i> means:	<ul style="list-style-type: none"> • structured program for the dissemination of information and the receipt of feedback information from individuals relevant to the process or activity

RANGE STATEMENT	
<i>Technology</i> may include:	<ul style="list-style-type: none"> • audio-visual media • internet • intranet • print media • radio • telephone • television
<i>Corporate knowledge</i> may include:	<ul style="list-style-type: none"> • copyright • intellectual property • technology

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units		

BSBINN201A Contribute to workplace innovation

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to make a pro active and positive contribution to workplace innovation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals working in any industry or community context, in both small and large organisations. They take a pro active approach to identifying, suggesting and developing ideas about better ways of doing things at a practical operational level in a specific area of activity. While the individual's overall work is undertaken with some supervision and guidance, the nature of this process requires the application of discretion, judgement and effective interpersonal skills.</p> <p>The unit assumes that there is wider organisational and management support for innovation and for individuals at all levels to contribute to the innovation process.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify opportunities to do things better	1.1. Be aware of <i>own role</i> in workplace innovation 1.2. Pro-actively identify <i>opportunities for improvement</i> in own area of work 1.3. Gather and review <i>information which may be relevant to ideas</i> and which might assist in gaining support for ideas
2. Discuss and develop ideas with others	2.1. Identify <i>people who could provide input</i> into ideas for improvements 2.2. Select the <i>best way of approaching people</i> to begin sharing ideas 2.3. Seek <i>feedback</i> on improvement of ideas, and discuss and develop <i>options and possible variations</i> 2.4. Review and select ideas for follow-up based on feedback and further review
3. Address the practicalities of change	3.1. Take action to implement <i>routine changes</i> in consultation with others and within scope of own responsibility 3.2. Identify and articulate <i>issues and practical processes</i> for implementing proposed ideas 3.3. Present ideas and practical suggestions to the appropriate people about how improvements could be made

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to liaise with other team members, to discuss a range of ideas and to be open to different opinions
- comprehension skills to review and interpret information from a wide range of sources
- organisational skills to articulate practical processes and actions for change
- problem-solving skills to identify and anticipate problems at a practical operational level and to develop possible solutions.

Required knowledge

- role and impact of innovation in the workplace at a practical operational level and the 'bigger picture' for innovation in the relevant work or community context
- role of individuals in suggesting and making improvements and the importance of pro-active involvement
- positive impacts and the challenges of change and innovation
- types of changes that can occur as a result of effective individual participation
- typical reasons why suggested improvements or innovations may not be implemented, including operational and management constraints
- ways in which improvements and change can be suggested to maximise likelihood of support.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • generation of practical ideas in response to a specific workplace situation • effective and open interaction with others to discuss and develop ideas • knowledge and understanding of the role of individuals in contributing to workplace innovation.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • interaction with others to reflect the collaborative nature of the improvement/innovation process.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • direct observation of the candidate participating in brainstorming, discussions and other collaborative activities to develop ideas • evaluation of candidate's ability to generate ideas to address a range of practical operational situations • evaluation of feedback from other people involved in the collaborative process about the candidate's communication approaches and abilities • oral or written questioning to assess knowledge of the role of innovation, the role of individuals in the innovation process and the types of techniques that can be used.
Guidance information for assessment	Innovation does not occur in isolation. Holistic assessment with other units relevant to the industry sector, workplace and job role is highly recommended.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Own role</i> may relate to:</p>	<ul style="list-style-type: none"> • current organisational practice in relation to new ideas • knowledge of ways to suggest new ideas • scope of individual discretion and freedom in relation to new ideas • who needs to be involved in the process
<p><i>Opportunities for improvement</i> may relate to:</p>	<ul style="list-style-type: none"> • changes in the physical work environment • different storage or maintenance procedures • different ways of communicating within the team • introduction of new technology • job role changes • new customer base • new work practices or services • staffing changes • work processes and procedures
<p><i>Information which may be relevant to ideas</i> may include:</p>	<ul style="list-style-type: none"> • examples of similar approaches in other contexts or organisations • media articles about similar ideas • notes about how the idea could improve efficiency or service levels • pricing information
<p><i>People who could provide input</i> may include those who might:</p>	<ul style="list-style-type: none"> • challenge and test the ideas • have supervisory or management responsibility • promote the ideas to others • provide technical knowledge • resource the ideas going forward • review any budgetary implications • work in the same area
<p><i>Best way of approaching people</i> may be influenced by:</p>	<ul style="list-style-type: none"> • degree of formality required • location of people (e.g. may not be on-site) • need for any supporting documentation

RANGE STATEMENT	
	<ul style="list-style-type: none"> time pressures and priorities
<i>Feedback</i> could be gained in a range of ways and may include:	<ul style="list-style-type: none"> asking questions talking to colleagues or supervisors using brainstorming techniques using 'what if' scenarios
<i>Options and possible variations</i> development may occur by:	<ul style="list-style-type: none"> considering resources needed considering time required taking on board ideas from other people thinking through all aspects of the ideas whole new concepts that come out of discussions
<i>Routine changes</i> may include:	<ul style="list-style-type: none"> adjustments to work practices with minimal impact on others or within a small team changes that do not require management approvals changes that have the support of management and for which authority is given for immediate action to be taken
<i>Issues and practical processes</i> may relate to:	<ul style="list-style-type: none"> any approvals required cost of implementation internal politics need for a planned communication approach (internal or external) personalities and philosophies of others in the workplace relationship of the idea to organisation priorities

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Creativity and Innovation - Innovation
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Co-requisite units

Co-requisite units		

BSBITU101A Operate a personal computer

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to start up a personal computer or business computer terminal; to correctly navigate the desktop environment; and to use a range of basic functions. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.
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Application of the Unit

Application of the unit	This unit applies to individuals developing basic skills and knowledge of personal computer operation in preparation for working in a broad range of settings.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Start computer, system information and features	1.1. Adjust workspace, furniture and equipment to suit user <i>ergonomic requirements</i> 1.2. Ensure <i>work organisation</i> meets organisational and <i>occupational health and safety (OHS) requirements</i> for computer operation 1.3. Start computer or log on according to user procedures 1.4. Identify basic functions and features using system information 1.5. Customise desktop configuration, if necessary, with assistance from appropriate persons 1.6. Use help functions as required
2. Navigate and manipulate desktop environment	2.1. Open, close and access features by selecting correct <i>desktop icons</i> 2.2. Open, resize and close desktop windows by using correct window functions and roles 2.3. Create shortcuts from the desktop, if necessary, with assistance from appropriate persons
3. Organise files using basic directory and folder structures	3.1. Create folders/subfolders with suitable names 3.2. Save files with suitable names in appropriate folders 3.3. Rename and move folders/subfolders and files as required 3.4. Identify folder/subfolder and <i>file attributes</i> 3.5. Move folders/subfolders and files using cut and paste, and drag and drop techniques 3.6. Save folders/subfolders and files to <i>appropriate media</i> where necessary 3.7. Search for folders/subfolders and files using appropriate software tools 3.8. Restore deleted folder/subfolders and files as necessary
4. Print information	4.1. Print information from installed printer 4.2. View progress of print jobs and delete as required 4.3. Change default printer if installed and required
5. Shut down computer	5.1. Close all open applications 5.2. Shut-down computer according to user procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to identify work requirements, to comprehend basic workplace documents, to interpret basic user manuals and to proofread simple documents
- communication skills to identify lines of communication, to request advice, to effectively question, to follow instructions and to receive feedback
- problem-solving skills to solve routine problems in the workplace, while under direct supervision
- technology skills to use equipment safely while under direction, basic keyboard and mouse skills and procedures relating to logging on and accessing a computer
- basic typing techniques and strategies.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - OHS
- basic ergonomics of computer use
- main types and parts of computers, and basic features of different operating systems
- suitable file naming conventions.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • navigation and manipulation of the desktop environment within the range of assigned workplace tasks • knowledge of organisational requirements for simple documents and filing conventions • application of simple keyboard functions to produce documents with a degree of speed and accuracy relevant to the level of responsibility required.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of workplace documentation.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • demonstration of techniques • oral or written questioning to assess knowledge of computer operations and functions • review of shortcuts created • review of folders/subfolders created.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBITU102A Develop keyboard skills • other general administration units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Ergonomic requirements</i> may include:	<ul style="list-style-type: none"> • avoiding radiation from computer screens • chair height, seat and back adjustment • document holder • footrest • keyboard and mouse position • lighting • noise minimisation • posture • screen position • workstation height and layout
<i>Work organisation</i> may include:	<ul style="list-style-type: none"> • exercise breaks • mix of repetitive and other activities • rest periods • visual display unit (VDU) eye testing
<i>Occupational health and safety requirements</i> may include:	<ul style="list-style-type: none"> • OHS guidelines related to the use of the screen equipment, computing equipment and peripherals, ergonomic work stations, security procedures, customisation requirements • statutory requirements
<i>Desktop icons</i> include:	<ul style="list-style-type: none"> • directories/folders • files • network devices • recycle bin and waste basket
<i>File attributes</i> include:	<ul style="list-style-type: none"> • dates • size
<i>Appropriate media</i> may include:	<ul style="list-style-type: none"> • CDs • diskettes • local hard drive • other locations on a network • USB/ Flash/Thumb drives • zip disks

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Information and Communications Technology - IT Use
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Co-requisite units

Co-requisite units		

BSBITU306A Design and produce business documents

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to design and produce various business documents and publications. It includes selecting and using a range of functions on a variety of computer applications.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who possess fundamental skills in computer operations and keyboarding. They may exercise discretion and judgement using appropriate theoretical knowledge of document design and production to provide technical advice and support to a team.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select and prepare resources	1.1. Select and use appropriate <i>technology</i> and <i>software</i> applications to produce required <i>business documents</i> 1.2. Select layout and style of publication according to information and <i>organisational requirements</i> 1.3. Ensure document design is consistent with company and/or client requirements, using basic design principles 1.4. Discuss and clarify format and style with person requesting document/publication
2. Design document	2.1. Identify, open and generate files and records according to task and organisational requirements 2.2. Design document to ensure efficient entry of information and to maximise the presentation and appearance of information 2.3. Use a range of <i>functions</i> to ensure consistency of design and layout 2.4. Operate <i>input devices</i> within designated requirements
3. Produce document	3.1. Complete document production within designated time lines according to organisational requirements 3.2. Check document produced to ensure it meets task requirements for style and layout 3.3. Store document appropriately and save document to avoid loss of data 3.4. Use manuals, training booklets and/or help-desks to overcome basic difficulties with document design and production
4. Finalise document	4.1. Proofread document for readability, accuracy and consistency in language, style and layout prior to final output 4.2. Make any modifications to document to meet requirements 4.3. <i>Name</i> and <i>store</i> document in accordance with organisational requirements and exit the application without data/loss damage 4.4. Print and present document according to requirements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- keyboarding and computer skills to complete a range of formatting and layout tasks
- literacy skills to read and understand a variety of texts; to prepare general information and papers according to target audience; and to edit and proofread documents to ensure clarity of meaning and conformity to organisational requirements
- numeracy skills to access and retrieve data
- problem-solving skills to determine document design and production processes.

Required knowledge

- appropriate technology for production requirements
- functions and features of contemporary computer applications
- organisational policies, plans and procedures
- organisational requirements for document design e.g. style guide.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> designing and producing a minimum of 3 completed business documents, using at least 2 software applications in the production of each document using appropriate data storage options knowledge of the functions and features of contemporary computer applications.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to an actual workplace or simulated environment access to office equipment and resources access to examples of style guides and organisational procedures.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate review of final printed documents demonstration of techniques observation of presentations oral or written questioning to assess knowledge of software applications.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> general administration units other IT use units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Technology may include:

- computers
- photocopiers
- printers
- scanners

Software may include:

- accounting packages
- database packages
- presentation packages
- spreadsheet packages
- word processing packages

Business documents may include:

- accounts statements
- client databases
- newsletters
- project reviews
- proposals
- reports
- web pages

Organisational requirements may include:

- budgets
- correctly identifying and opening files
- legal and organisational policies, guidelines and requirements
- locating data
- log-on procedures
- manufacturers' guidelines
- occupational health and safety policies, procedures and programs
- quality assurance and/or procedures manuals
- saving and closing files
- security
- storing data

Functions may include:

- alternating headers and footers
- editing
- merging documents

RANGE STATEMENT	
	<ul style="list-style-type: none"> • spell checking • table formatting • using columns • using styles
<i>Input devices</i> may include:	<ul style="list-style-type: none"> • keyboard • mouse • numerical key pad • scanner
<i>Naming</i> documents may include:	<ul style="list-style-type: none"> • appropriate file type • authorised access • file names according to organisational procedure e.g. numbers rather than names • file names which are easily identifiable in relation to the content • file/directory names which identify the operator, author, section, date etc. • filing locations • organisational policy for backing up files • organisational policy for filing hard copies of documents • security
<i>Storing</i> documents may include:	<ul style="list-style-type: none"> • storage in directories and sub-directories • storage on CD-ROMs, disk drives or back-up systems • storing/filing hard copies of computer generated documents • storing/filing hard copies of incoming and outgoing facsimiles • storing/filing incoming and outgoing correspondence

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Information and Communications Technology - IT Use
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Co-requisite units

Co-requisite units	

BSBMGT402A Implement operational plan

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to implement the operational plan by monitoring and adjusting operational performance, producing short term plans for the department/section, planning and acquiring resources and providing reports on performance as required.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>Frontline managers are actively engaged in planning activities to achieve the measurable, stated objectives of the team and the organisation. This key role is carried out to provide safe, efficient and effective products and services to customer satisfaction within the organisation's productivity and profitability plans.</p> <p>At this level, work will normally be carried out within routine and non routine methods and procedures, which require planning, evaluation, leadership and guidance of others.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Implement operational plan	<p>1.1. Collate, analyse and organise details of resource requirements in consultation with relevant personnel, colleagues and specialist resource managers</p> <p>1.2. Implement operational plans to contribute to the achievement of organisation's performance/business plan</p> <p>1.3. Identify and use key performance indicators (KPIs) to monitor operational performance</p> <p>1.4. Undertake contingency planning and consultation processes</p> <p>1.5. Provide assistance in the development and presentation of proposals for resource requirements in line with operational planning processes</p>
2. Implement resource acquisition	<p>2.1. Recruit and induct employees within organisation's policies, practices and procedures</p> <p>2.2. Implement plans for acquisition of physical resources and services within organisation's policies, practices and procedures and in consultation with relevant personnel</p>
3. Monitor operational performance	<p>3.1. Monitor performance systems and processes to assess progress in achieving profit/productivity plans and targets</p> <p>3.2. Analyse and use budget and actual financial information to monitor profit/productivity performance</p> <p>3.3. Identify unsatisfactory performance and take prompt action to rectify the situation according to organisational policies</p> <p>3.4. Provide mentoring, coaching and supervision to support individuals and teams to use resources effectively, economically and safely</p> <p>3.5. Present recommendations for variation to operational plans to the designated persons/groups and gain approval</p> <p>3.6. Implement systems, procedures and records associated with performance in accordance with organisation's requirements</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- coaching and mentoring skills to provide support to colleagues
- literacy skills to access and use workplace information, and to prepare reports
- planning and organising skills to monitor performance and to sequence work of self and others to achieve planned outcomes.

Required knowledge

- principles and techniques associated with:
 - contingency planning
 - methods for monitoring and reporting on performance
 - monitoring and implementing operations and procedures
 - problem identification and methods of resolution
 - relevant budgeting and financial analysis, interpretation and reporting requirements
 - resource management systems at the tactical implementation level
 - resource planning and acquisition
 - tactical risk analysis including identification and reporting requirements.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> ability to monitor and adjust operational performance, produce short-term plans for the department or section, plan and acquire resources, and provide reports on performance as required knowledge of principles and techniques associated with monitoring and implementing operations and procedures.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to appropriate documentation and resources normally used in the workplace.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate review of documentation outlining contingency planning and consultation processes undertaken demonstration of techniques in managing performance evaluation of mentoring, coaching and supervision provided to support individuals and teams to use resources effectively, economically and safely.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> other units from the Certificate IV in Frontline Management.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Resource requirements</i> may refer to:</p>	<ul style="list-style-type: none"> • goods and services to be purchased and ordered • human, physical and financial resources - both current and projected • stock requirements and requisitions
<p><i>Relevant personnel, colleagues and specialist resource managers</i> may include:</p>	<ul style="list-style-type: none"> • colleagues and specialist resource managers • managers • occupational health and safety committees and other people with specialist responsibilities • other employees • people from a wide range of social, cultural and ethnic backgrounds, and people with a range of physical and mental abilities • supervisors
<p><i>Operational plans</i> may refer to:</p>	<ul style="list-style-type: none"> • organisational plans • tactical plans developed by the department or section to detail product and service performance
<p><i>Key performance indicators</i> may refer to:</p>	<ul style="list-style-type: none"> • measures for monitoring or evaluating the efficiency or effectiveness of a system, and which may be used to demonstrate accountability and to identify areas for improvements
<p><i>Contingency planning</i> may refer to:</p>	<ul style="list-style-type: none"> • contracting out or outsourcing human resources and other functions or tasks • diversification of outcomes • finding cheaper or lower quality raw materials and consumables • increasing sales or production • recycling and re-use • rental, hire purchase or alternative means of procurement of required materials, equipment and stock • restructuring of organisation to reduce labour

RANGE STATEMENT	
	<ul style="list-style-type: none"> costs • risk identification, assessment and management processes • seeking further funding • strategies for reducing costs, wastage, stock or consumables • succession planning
<i>Consultation processes</i> may refer to:	<ul style="list-style-type: none"> • mechanisms used to provide feedback to the work team in relation to outcomes of consultation • meetings, interviews, brainstorming sessions, email/intranet communications, newsletters or other processes and devices which ensure that all employees have the opportunity to contribute to team and individual operational plans
<i>Organisation's policies, practices and procedures</i> may include:	<ul style="list-style-type: none"> • organisational culture • Standard Operating Procedures • organisational guidelines which govern and prescribe operational functions, such as the acquisition and management of human and physical resources • undocumented practices in line with organisational operations
<i>Performance systems and processes</i> may refer to:	<ul style="list-style-type: none"> • informal systems used by frontline managers for the work team in the place of existing organisation-wide systems • formal processes within the organisation to measure performance, such as: <ul style="list-style-type: none"> • feedback arrangements • individual and teamwork plans • KPIs • specified work outcomes
<i>Designated persons/groups</i> may include:	<ul style="list-style-type: none"> • other affected work groups or teams and groups designated in workplace policies and procedures • those who have the authority to make decisions and/or recommendations about operations such as workplace supervisors, other managers
<i>Systems, procedures and records</i>	<ul style="list-style-type: none"> • databases and other recording mechanisms for ensuring records are kept in accordance with

RANGE STATEMENT

may include:	organisational requirements <ul style="list-style-type: none"> • individual and team performance plans • organisational policies and procedures relative to performance
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Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units		

BSBMGT605B Provide leadership across the organisation

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to demonstrate senior leadership behaviour, and personal and professional competence.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to senior managers who have a role in inspiring and motivating others to achieve organisational goals and to model professionalism in their organisation and industry. Leadership is seen in the context of the organisational mission. Business ethics are also addressed in this unit.</p> <p>The unit may relate equally to leadership of a small to medium sized organisation or to a business unit or area in a large organisation.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Communicate organisational mission and goals	1.1. Clarify objectives, values and standards in accordance with organisation's strategic direction 1.2. Establish linkages between organisational objectives, values and standards and the responsibilities of relevant groups and individuals 1.3. Ensure media and language used is appropriate to individuals and group circumstances 1.4. State clear expectations of internal groups and individuals and explain in a manner which builds commitment to the organisation 1.5. Address <i>expectations of the organisation</i> 1.6. Investigate <i>incidents</i> promptly and communicate results clearly to relevant groups and individuals
2. Influence groups and individuals	2.1. Build trust, confidence and respect of diverse groups and individuals, through positive role modelling, and effective communication and consultation 2.2. Embrace, resource and effectively implement improvements to organisational and workplace culture 2.3. Demonstrate understanding of the global environment and new technology in work activities 2.4. Ensure actions convey flexibility and adaptability to change and accessibility 2.5. Ensure consultation and participation in decision making occurs with relevant groups and individuals where appropriate 2.6. Ensure decision making takes into account needs and expectations of both internal and external groups 2.7. Ensure decision making occurs in accordance with <i>risk management</i> plans for all options, and within appropriate timeframes 2.8. Ensure that the organisation is represented positively in the media and community
3. Build and support teams	3.1. Assign <i>accountabilities and responsibilities</i> to teams consistent with their competencies and operational plans 3.2. Ensure teams are resourced to allow them to achieve their objectives

ELEMENT	PERFORMANCE CRITERIA
	<p>3.3. Empower teams and individuals through effective delegation and support for their initiatives</p> <p>3.4. Create and maintain <i>a positive work environment</i></p> <p>3.5. Encourage teams and individuals to develop innovative approaches to the performance of work</p>
4. Demonstrate personal and professional competence	<p>4.1. Model ethical conduct in all areas of work and encourage others to adopt business ethics</p> <p>4.2. Adapt appropriate interpersonal and leadership styles to meet particular circumstances and situations</p> <p>4.3. Set and achieve personal objectives and work program outcomes</p> <p>4.4. Ensure self performance and professional competence is continuously improved through engagement in a range of professional development activities</p> <p>4.5. Participate regularly in industry/professional networks and groups</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- interpersonal skills to communicate and inspire trust and confidence of others and to ensure their cooperation and support
- networking skills to ensure support from key groups and individuals for concepts/ideas/products/services
- risk management skills to analyse, identify and develop mitigation strategies for identified risks.

Required knowledge

- business ethics and their application
- leadership styles and their application
- legislation, codes and by-laws relevant to the organisation's operations
- organisation mission, purpose and values
- organisation objectives, plans and strategies
- organisational change processes.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • input from a wide range of sources providing evidence in respect to a broad range of activities and application of business ethics • demonstration of personal competence that links to the organisation's requirements for managers • effective communication skills and an ability to win commitment to the organisation and its activities • knowledge of leadership styles and their application • knowledge of legislation, codes and by-laws relevant to the organisation's operations.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to appropriate documentation and resources normally used in the workplace.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • analysis of responses to case studies and scenarios • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • observation of demonstrated leadership techniques • observation of presentations • review of media and language used when communicating with individuals and groups • evaluation of accountabilities and responsibilities assigned to teams • review of documentation outlining personal objectives and work program outcomes • review of professional development activities undertaken to improve self performance and professional competence.
Guidance information for	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended,

EVIDENCE GUIDE**assessment**

for example:

- other units from the Advanced Diploma of Management.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Expectations of the organisation</i> include:</p>	<ul style="list-style-type: none"> • environmental management • occupational health and safety • product safety • service • values and ethics • other relevant factors
<p><i>Incidents</i> may include:</p>	<ul style="list-style-type: none"> • emergency response • environmental event (emissions, noise, etc.) • product failure • workplace accident
<p><i>Risk management</i> means:</p>	<ul style="list-style-type: none"> • process of identification of potential negative events and the development of plans to mitigate or minimise the likelihood of the negative event occurring and/or the consequences in the event it does occur
<p><i>Accountabilities and responsibilities</i> means:</p>	<ul style="list-style-type: none"> • clarification of who is to be accountable for a decision or action prior to its execution, and identification of groups, individuals and activities for which a person is responsible for managing
<p><i>Positive work environment</i> means:</p>	<ul style="list-style-type: none"> • environment where employees identify with the organisation and its purpose and where communication is free-flowing, decisions are transparent and conflict is positive and constructive

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units	

BSBMGT608B Manage innovation and continuous improvement

Modification History

Not Applicable

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to sustain and develop an environment in which continuous improvement, innovation and learning are promoted and rewarded.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

This unit applies to people who have managerial responsibilities which include building a better and more effective work environment. Continuous improvement and innovation have links with the model of the learning organisation and people working at this level play an important role in building the culture, values and attitudes of the organisation.

Links may be made between continuous improvement and formal quality systems such as International Standardization for Organization (ISO) or quality software. However it is not assumed that formal quality systems or software are in the workplace.

Innovation is seen as an important attitude and set of practices which should be fostered by people working at this level in teams and across the organisation.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Review programs, systems and processes	1.1. Establish strategies to monitor and evaluate performance of key systems and processes 1.2. Undertake detailed analyses of supply chains , operational and product/service delivery systems 1.3. Identify performance measures, and assessment tools and techniques, and evaluate their effectiveness 1.4. Analyse performance reports and variance from plans for all key result areas of the organisation 1.5. Identify and analyse changing trends and opportunities relevant to the organisation 1.6. Seek advice from specialists , where appropriate, to identify technology and electronic commerce opportunities
2. Develop options for continuous improvement	2.1. Brief groups on performance improvement strategies and innovation as an essential element of competition 2.2. Foster creative climate and organisational learning through the promotion of interaction within and between work groups 2.3. Encourage, test and recognise new ideas and entrepreneurial behaviour where successful 2.4. Accept failure of an idea during trialling, and recognise, celebrate and embed success into systems 2.5. Undertake risk management and cost benefit analyses for each option/idea approved for trial 2.6. Approve innovations through agreed organisational processes
3. Implement innovative processes	3.1. Promote continuous improvement as an essential part of doing business 3.2. Address impact of change and consequences for people, and implement transition plans 3.3. Ensure objectives, timeframes, measures and communication plans are in place to manage implementation

	<p>3.4. Implement <i>contingency plans</i> in the event of non-performance</p> <p>3.5. Follow-up failure by prompt investigation and analysis of causes</p> <p>3.6. Manage emerging challenges and opportunities effectively</p> <p>3.7. Evaluate continuous improvement systems and processes regularly</p> <p>3.8. Communicate costs and benefits of innovations and improvements to all relevant groups and individuals</p>
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Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to identify improvement opportunities in relation to the services/products delivered or concepts/ideas developed
- flexibility and creativity skills to think laterally
- leadership skills to foster a commitment to quality and an openness to innovation.

Required knowledge

- quality management and continuous improvement theories
- creativity/innovation theories/concepts
- risk management.

Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • documentation of consultation processes to introduce or evaluate an existing continuous improvement process or system, including suggested actions or an action plan • generation of an idea or concept which exhibits creative thinking and which offers the possibility of advantaging the organisation • how the concept or idea was introduced, tested and evaluated - the idea or concept does not have to have been shown to work or to be adopted by the business • knowledge of quality management and continuous improvement theories.
<p>Context of and specific resources for assessment</p>	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to appropriate documentation and resources normally used in the workplace.
<p>Method of assessment</p>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • analysis of responses to case studies and scenarios • assessment of written reports • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • observation of presentations • oral or written questioning to assess knowledge of creativity/innovation theories/concepts • evaluation of strategies established to monitor and evaluate performance of key systems and processes • review of briefing of groups on performance improvement strategies and innovation

	<ul style="list-style-type: none">• review of documentation communicating costs and benefits of innovations and improvements to relevant groups and individuals.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none">• other units from the Advanced Diploma of Management.

Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Supply chains</i> includes:</p>	<ul style="list-style-type: none"> • network of facilities that procures raw materials, transforms them into intermediate products (or services) and then finished goods (or services), and delivers them through a distribution system • procurement, production and distribution, which are viewed as being interlinked not as discrete elements
<p><i>Performance reports</i> may include:</p>	<ul style="list-style-type: none"> • budget/cost variance • customer service • environmental • financial • occupational health and safety • quality • other operating parameters
<p><i>Specialists</i> refers to:</p>	<ul style="list-style-type: none"> • those people inside and outside the organisation who are expert in the application of technology to process systems and procedures, relevant to the organisation's business
<p><i>Creative climate</i> means:</p>	<ul style="list-style-type: none"> • climate of high motivation with extensive expertise, and deliberative and lateral thinking time to think through and test out ideas
<p><i>Organisational learning</i> refers to:</p>	<ul style="list-style-type: none"> • extent to which groups and individuals within an organisation are given the opportunity to learn from each other and encouraged to share their learning
<p><i>Risk management</i> means:</p>	<ul style="list-style-type: none"> • process of identification of potential negative events and the development of plans to mitigate or minimise the likelihood of the negative event occurring and/or the consequences in the event it does occur
<p><i>Cost benefit analyses</i> means:</p>	<ul style="list-style-type: none"> • calculation to determine whether the results/outcomes of a particular course of action are sufficient to justify the costs and risks in taking that action

<i>Continuous improvement</i> means:	<ul style="list-style-type: none">consistently reviewing what we do in search of a better way and improving the organisation in every aspect of its activities
<i>Transition plan</i> means:	<ul style="list-style-type: none">process of communication and education to help people through major change programs which impact on the way they do their work or them personally
<i>Contingency plan</i> means:	<ul style="list-style-type: none">plan which will deal with the uncertainty of a proposal and will come into operation in the event of a failure or non-conformance

Unit Sector(s)

Management and Leadership - Management

BSBMGT616A Develop and implement strategic plans

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to establish the strategic direction of the organisation, and to sustain competitive advantage and enhance competitiveness. It requires analysis and interpretation of relevant markets, capability assessment of the organisation, and its existing and potential competitors and allies. It also covers implementation of the strategic plan.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals working in senior roles in the organisation, who have responsibility for ensuring that the organisation is positioned to ensure its long term viability and success. The unit covers the requirements for analysing the organisation's present position, and for developing specific actions and initiatives that will be undertaken by people working in various roles.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Confirm organisational vision and mission	1.1. Check with <i>stakeholders</i> that organisational vision and mission are still held to be current and are supported 1.2. Make any changes or refinements to vision or mission statement as required 1.3. Review or develop organisational values to support the vision and mission statement 1.4. Gain support for strategic planning process from all relevant stakeholders
2. Analyse the internal and external environment	2.1. Determine information requirements and undertake or commission <i>research</i> to deliver relevant information 2.2. Analyse political, economic, social, and technological developments in a <i>global context</i> 2.3. Seek advice from appropriate experts wherever necessary 2.4. Identify and consider strengths and weaknesses of existing and potential competitors and allies 2.5. Analyse organisation's strengths, weaknesses, opportunities and threats 2.6. Consider co-operative ventures that are supported by risk and cost-benefit analyses, are consistent with the organisational vision, mission and values, and provide for <i>due diligence</i> 2.7. Check that analysis of internal and external environment is consistent with the perspectives of other informed people
3. Write strategic plan	3.1. Document relevant research and background for inclusion in the strategic plan 3.2. Formulate strategic objectives and strategies needed for the future 3.3. Detail each strategy with an assigned priority, a timeframe, responsible parties and measurable performance indicators 3.4. Circulate strategic plan for comment, support and endorsement
4. Implement strategic plan	4.1. Communicate strategic plan to all relevant parties 4.2. Brief people with a specific role in relation to strategies 4.3. Use performance indicators to monitor progress in

ELEMENT	PERFORMANCE CRITERIA
	implementing plan 4.4. Make necessary refinements to plan 4.5. Evaluate achievement of objectives at agreed milestones 4.6. Review effectiveness of plan and consider methods for improving strategic planning processes

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to undertake value chain analysis, to review strengths and weaknesses, and to collate and interpret statistical data including trend analysis
- financial skills to consider resource implications of proposed strategies
- research skills to ensure accurate, up-to-date information is available for the environmental analysis
- risk management skills to plan and undertake appropriate due diligence.

Required knowledge

- relevant legislation from all levels of government that affects business operation, especially in regard to occupational health and safety and environmental issues, equal opportunity, industrial relations and anti-discrimination
- strategic planning methodologies including political, economic, social and technological (PEST) analysis and strengths, weaknesses, opportunities and threats analysis (SWOT)
- competitor knowledge
- codes and by-laws relevant to the organisation's operations.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> thorough analysis of the organisation's own capabilities, those of their existing potential competitors and allies, and the external environment strategic plan which includes objectives, strategies, timeframes, performance indicators and methods for monitoring the implementation of the plan knowledge of relevant legislation.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to appropriate documentation and resources normally used in the workplace.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate observation of presentations oral or written questioning to assess knowledge of strategic planning methodologies review of documentation outlining strengths and weaknesses of existing and potential competitors and allies review of strategies and their assigned priority, timeframe, responsible parties and performance indicators.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> other units from the Advanced Diploma of Management.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Stakeholders</i> may include:	<ul style="list-style-type: none"> • Board • customers • employees • government agencies • owners • shareholders • technical advisers
<i>Research</i> may include:	<ul style="list-style-type: none"> • commissioned research • demographics • economics • internal research • market segmentation • political • product • social • technological
<i>Global context</i> means:	<ul style="list-style-type: none"> • examination on a world-wide basis of factors which may impact on the long-term strategic direction of the business
<i>Due diligence</i> means:	<ul style="list-style-type: none"> • process by which an investor, lawyer, auditor, or other qualified person, verifies the accuracy of data provided by another organisation

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units	

BSBMGT617A Develop and implement a business plan

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to run a business operation and covers the steps required to develop and implement a business plan.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who are running an organisation or who take a senior role in determining the effective functioning and success of the organisation. As such, they may oversee the work of a number of teams and other managers.</p> <p>Business plans are critical tools for business growth and development. They will vary depending on the needs of the organisation. This unit covers the typical elements of a business plan and the standard approaches to be used in implementing a business plan.</p> <p>The business plan should be supported by a strategic plan, and may also be supported by a marketing plan and cash flow forecasts.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop business plan	1.1. Review and evaluate pre-existing <i>strategic, business and operational plan</i> , if available 1.2. Analyse and interpret business vision, mission, values and objectives 1.3. Consult with <i>key stakeholders</i> 1.4. Review market requirements for the product or service, profile customer needs and research pricing options 1.5. Develop <i>performance objectives and measures</i> through consultation with key stakeholders 1.6. Identify financial, human and physical resource requirements for the business 1.7. Consider any permits or licences that may be required for new activity 1.8. Write <i>business plan</i>
2. Monitor performance	2.1. Communicate business plan to all relevant parties and ensure understanding of performance requirements and timeframes 2.2. Ensure skilled labour is available to implement plan 2.3. Test performance measurement systems and refine, if necessary 2.4. Ensure timely reports on all key aspects of the business are available, user-friendly and balanced in terms of financial and non-financial performance 2.5. Report system failures, product failures and variances to the business plan as they occur
3. Respond to performance data	3.1. Analyse performance reports against planned objectives 3.2. Review performance indicators and refine if necessary 3.3. Ensure groups and individuals contributing to under-performance are <i>coached</i> , and provide training where appropriate 3.4. Review system processes and work methods regularly as part of continuous improvement

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical and research skills to review the market, to research competitors and to review pricing structures
- coaching and communication skills to remediate any under-performance in the work group or individuals
- planning and organising skills to sequence activities and to develop a logical structure.

Required knowledge

- performance measurement approaches and benchmarking
- options for developing business plans.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> analysis of the strengths and weaknesses of a range of business plans implementation of a business plan including evaluation of performance against documented indicators in key results areas knowledge of performance measurement approaches and benchmarking.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to appropriate documentation and resources normally used in the workplace.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> assessment of written reports/examples of business plans and their outcomes direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate oral or written questioning to assess knowledge of options for developing business plans review of development of performance objectives and measures review of how business plan was communicated to all relevant parties.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> other units from the Advanced Diploma of Management.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Strategic, business and operational plan</i> may include:</p>	<ul style="list-style-type: none"> • previously formulated: <ul style="list-style-type: none"> • action plan • business goals • competitor analysis • financing arrangements or financial targets • management arrangements and/or personnel requirements • marketing approaches • product or service research or analysis
<p><i>Key stakeholders</i> may include:</p>	<ul style="list-style-type: none"> • business partners or financiers • customers • shareholders • staff • technical experts or advisers
<p><i>Performance objectives and measures</i> may relate to:</p>	<ul style="list-style-type: none"> • efficiency measures • input measures such as staff time or dollars allocated • outcomes measures • qualitative indicators such as feedback from customers, effect on the wider market or competitors, staff reports • quantitative indicators, such as numbers produced and sold, turnover, customer satisfaction ranking, lower staff turnover
<p><i>Business plan</i> includes:</p>	<ul style="list-style-type: none"> • description of the business • business products and services • marketing activity • financial indicators • productivity and performance targets for key result areas such as: <ul style="list-style-type: none"> • community awareness or branding • environmental impact

RANGE STATEMENT	
	<ul style="list-style-type: none"> • governance or management • quality • sales • triple bottom line • workforce
<i>Coaching</i> refers to:	<ul style="list-style-type: none"> • informal on-the-job and off-the-job advice and training to improve performance

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units		

BSBMKG413A Promote products and services

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to coordinate and review the promotion of an organisation's products and services.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals with a broad knowledge of the promotion of products and services specific to an organisation. They may have responsibility to provide guidance or to delegate aspects of these tasks to others.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan promotional activities	1.1. Identify and assess <i>promotional activities</i> to ensure compatibility with <i>organisational requirements</i> 1.2. Plan and schedule promotional activities according to the marketing needs of the organisation 1.3. Determine overall promotional objectives in consultation with <i>designated individuals and groups</i> 1.4. Ensure that time lines and costs for promotion of activities are realistic and consistent with budget resources 1.5. Develop action plans to provide details of products and services being promoted
2. Coordinate promotional activities	2.1. Ensure <i>personnel and resources</i> to support promotional activities are identified and prepared to facilitate the achievement of promotional goals 2.2. Identify and agree <i>roles and responsibilities</i> for delivery of promotional services and allocate to relevant personnel 2.3. Establish and conduct relationships with targeted groups in a manner which enhances the positive image of the organisation 2.4. Use <i>networks</i> to assist in the implementation of promotional activities
3. Review and report on promotional activities	3.1. Analyse audience feedback and data to determine the impact of the promotional activity on the delivery of products and services 3.2. Assess effectiveness of planning processes to identify possible improvements in future activities 3.3. Collect <i>feedback</i> and provide to personnel and agencies involved in promotional activity 3.4. Analyse costs and time lines to evaluate the benefits accruing from the promotional activities 3.5. Prepare conclusions and recommendations from verifiable evidence and provide constructive advice on future directions of promotional activities

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to read a variety of texts; to prepare general information and papers; and to write formal and informal letters according to target audience
- technology skills to select and use technology appropriate to a task
- problem-solving skills to manage contingencies in promotional activities
- numeracy skills to analyse data and to compare time lines and promotional costs against budgets.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - environmental issues
 - occupational health and safety (OHS)
- planning processes for organising promotional activities
- organisational marketing plan and associated budgets.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • designing and delivering promotional presentations • evaluating promotional impacts • presenting and advocating promotional strategies within the organisation • assessing and reporting on customer satisfaction
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of products/services and promotional strategies.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of action plans developed for products and services being promoted • analysis of responses to case studies and scenarios • demonstration of techniques • observation of presentations • assessment of written reports.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • other marketing, sales or public relations units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Promotional activities</i> may include:</p>	<ul style="list-style-type: none"> • advertisements • client functions • employee functions • media announcements • product launches • web pages
<p><i>Organisational requirements</i> may include:</p>	<ul style="list-style-type: none"> • access and equity principles and practices • confidentiality and security requirements • defined resource parameters • ethical standards • filing and documentation storage processes • goals, objectives, plans, systems and processes • legal and organisational policies, guidelines and requirements • OHS policies, procedures and programs • payment and delivery options • pricing and discount policies • quality and continuous improvement processes and standards • quality assurance and/or procedures manuals • replacement and refund policy and procedures • who is responsible for products or services
<p><i>Designated individuals and groups</i> may include:</p>	<ul style="list-style-type: none"> • colleagues • committees • customers • external organisations • line management • supervisor
<p><i>Personnel and resources</i> may include:</p>	<ul style="list-style-type: none"> • management • marketing funds • organisational personnel • promotional products

RANGE STATEMENT	
	<ul style="list-style-type: none"> • samples • technology • time • venue
<i>Roles and responsibilities</i> may include:	<ul style="list-style-type: none"> • Code of Conduct • job description and employment arrangements • marketing plans • organisation's policy relevant to work role • skills, training and competencies • supervision and accountability requirements including OHS • team structures
<i>Networks</i> may include:	<ul style="list-style-type: none"> • company • customer • internal • media and promotional • professional • social
<i>Feedback</i> may include:	<ul style="list-style-type: none"> • customer/client response • employee data • sales orders • market share data • focus groups

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Business Development - Marketing
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Co-requisite units

Co-requisite units		

BSBMKG501B Identify and evaluate marketing opportunities

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to identify, evaluate and take advantage of marketing opportunities by analysing market data, distinguishing the characteristics of possible markets and assessing the viability of changes to operations.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals working in senior marketing management roles who, together with a marketing team, identify, investigate and evaluate marketing opportunities to determine whether they meet organisational and marketing objectives. Based on this evaluation, changes to current business operations can be determined to take advantage of marketing opportunities.</p> <p>Adjusting the marketing mix in the light of new marketing opportunities is covered in BSBMKG502B Establish and adjust the marketing mix.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify marketing opportunities	1.1. Analyse <i>information on market and business needs</i> to identify <i>marketing</i> opportunities 1.2. Research potential <i>new markets</i> and assess opportunities to enter, shape or influence the market in terms of likely <i>contribution to the business</i> 1.3. Explore entrepreneurial, innovative approaches and creative ideas for their potential business application, and develop into potential marketing opportunities
2. Investigate marketing opportunities	2.1. Identify and analyse opportunities in terms of their likely fit with organisational goals and capabilities 2.2. <i>Evaluate</i> each opportunity to determine its impact on current business and customer base 2.3. Use an assessment of <i>external factors</i> , costs, benefits, risks and opportunities to determine the financial viability of each marketing opportunity 2.4. Determine probable return on investment and potential competitors 2.5. Describe and rank marketing opportunities in terms of their viability and likely contribution to the business
3. Evaluate required changes to current operations	3.1. Identify and document changes needed to current operations to take advantage of viable marketing opportunities 3.2. Ensure organisational changes to service an increased or different customer base include provision for continued quality of service to existing customers 3.3. Estimate <i>resource requirements</i> for changed operations 3.4. Determine and communicate viability of making changes to current operations to <i>key stakeholders</i> 3.5. Document newly identified marketing opportunities and required changes

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- culturally appropriate communication skills to relate to people from diverse backgrounds and people with diverse abilities
- literacy skills to identify and interpret market information, to write in a range of styles for different audiences and to document outcomes and requirements
- numeracy skills to calculate and evaluate financial information on new marketing options
- research and evaluation skills to gain information on and interpret market trends to identify marketing opportunities.

Required knowledge

- key provisions of relevant legislation from all forms of government, codes of practice and national standards that may affect aspects of business operations such as:
 - anti-discrimination legislation and the principles of equal opportunity, equity and diversity
 - ethical principles
 - marketing codes of practice and conduct such as the Australian Direct Marketing Association (ADMA) Direct Marketing Code of Practice; Free TV Australia Commercial Television Industry Code of Practice; and the Australian E-commerce Best Practice Model
 - privacy laws
 - Trade Practices Act
- organisational marketing plan, structure, products and services
- principles of marketing and the marketing mix
- statistical methods and techniques to evaluate marketing opportunities, including forecasting techniques.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> identifying and evaluating marketing opportunities to determine whether they will meet organisational objectives documenting how current business operations will need to be modified and what resources will be required to take advantage of newly identified and evaluated opportunities.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to office equipment and resources access to organisational strategic and marketing plans.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> analysis of responses to case studies assessment of written reports on identified marketing opportunities and evaluation activities direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate observation of presentations on opportunity identification, evaluation and required resources to capitalise on new marketing opportunities oral or written questioning to assess knowledge and understanding review of authenticated documents from the workplace or training environment review of testimony from team members, colleagues, supervisors or managers.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> BSBMKG502B Establish and adjust the marketing

EVIDENCE GUIDE	
	<ul style="list-style-type: none">mix• international business units• other marketing units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Information on market and business needs</i> may include:	<ul style="list-style-type: none"> • comparative market information • competitors' performance • customer requirements • legal and ethical requirements • market share • market trends and developments • new and emerging markets • profitability • sales figures
<i>Marketing</i> may include:	<ul style="list-style-type: none"> • business-to-business marketing • direct marketing • ideas marketing • marketing of goods • public sector marketing • services marketing • telemarketing
<i>New markets</i> may include:	<ul style="list-style-type: none"> • e-commerce • export markets • segments of the market not currently penetrated
<i>Contribution to the business</i> may include:	<ul style="list-style-type: none"> • effect on sales volume • growth • market share • profitability
<i>Evaluation</i> may include:	<ul style="list-style-type: none"> • investigation of: <ul style="list-style-type: none"> • knockout factors • present value analysis • return on investment • scored criteria • weighted criteria
<i>External factors</i> may include:	<ul style="list-style-type: none"> • codes of practice • policies and guidelines

RANGE STATEMENT	
	<ul style="list-style-type: none"> • regulations • relevant legislation
<i>Resource requirements</i> may include:	<ul style="list-style-type: none"> • additional staff • distribution costs • equipment • production costs • promotional costs • research and development • re-tooling • staff training
<i>Key stakeholders</i> may include:	<ul style="list-style-type: none"> • Board of directors • finance staff • human resources staff • managers • marketing personnel • owners • production staff • supervisors

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Business Development - Marketing
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Co-requisite units

Co-requisite units	

BSBMKG605B Evaluate international marketing opportunities

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to evaluate the international environment, to identify market factors and risks, and to assess the viability of international marketing opportunities.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to senior marketing or management personnel who are required to evaluate the international business environment in preparation for entering an international or export market for the first time, or to identify new marketing opportunities in markets in which their organisation already has a presence.</p> <p>This unit is different to BSBMKG501B Identify and evaluate marketing opportunities, which applies to senior marketing or general managers evaluating domestic marketing opportunities.</p> <p>While the underlying principles of the units are similar, this unit covers the increased complexity of the global business environment, and the cultural differences and international trade agreements to be addressed when conducting business internationally.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Review the global market environment	1.1. Assess international trade patterns and identify their likely importance for the business 1.2. Research <i>international business and electronic commerce market factors</i> and assess opportunities to enter, shape or influence the market in terms of likely contribution to the business 1.3. Identify international markets operating under free trade or protectionist arrangements and estimate likely ease of entering and trading successfully 1.4. Identify <i>international trade policies and agreements</i> and estimate their likely impact on <i>international marketing opportunities</i>
2. Assess international business and electronic commerce market factors	2.1. Identify and analyse impact of economic, political, <i>social and cultural factors</i> affecting international market on international marketing opportunities 2.2. Investigate international market trends and developments to identify market needs relative to the business 2.3. Identify new and emerging business and electronic commerce markets, and assess opportunities to enter, shape or influence markets in terms of their fit with business goals and direction, and their likely contribution to the business
3. Identify risk factors for international marketing opportunities	3.1. Analyse and rate acceptability of political, financial stability and corruption <i>risk factors</i> for potential market 3.2. Analyse and rate acceptability of legal and regulatory requirements, and trade barriers for potential market 3.3. Relate risk factors to international business cycles in terms of <i>economic conditions</i> and estimate their impact on potential market
4. Investigate international business and electronic commerce marketing opportunities	4.1. Identify and analyse international marketing opportunities in terms of their likely fit with the organisation's goals and capabilities 4.2. Evaluate each opportunity to determine its impact on current business and customer base 4.3. Use an assessment of costs, benefits, risks and opportunities to determine financial viability of each marketing opportunity 4.4. Determine probable return on investment and

ELEMENT	PERFORMANCE CRITERIA
	potential competitors 4.5. Describe and rank marketing opportunities in terms of viability and likely contribution to the business

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to gather information and to communicate with cultural sensitivity
- culturally appropriate communication skills to relate to people from diverse backgrounds and people with diverse abilities
- literacy skills to read and interpret information from a variety of sources
- research, information management and evaluation skills to determine viable international business opportunities through careful analysis of market and risk factors
- technology skills to use a range of office equipment and software when conducting electronic commerce.

Required knowledge

- Australian Standards and international standards, including those covering:
 - environmental matters
 - human rights
 - labour relations
 - packaging
 - risk management
- cross-cultural communication and negotiation styles relevant to the country or countries being considered for market entry or for further market penetration
- global and country specific economic, social and industry directions, trends, practices and techniques
- Organisation for Economic Co-operation and Development (OECD) International Guidelines for Consumer Protection in the Context of Electronic Commerce
- Australian Government Policy Framework for Consumer Protection in Electronic Commerce
- Australian Guidelines for Electronic Commerce
- key provisions of relevant legislation from all forms of government, codes of practice and national and international standards that may affect aspects of business operations within Australia and internationally, such as:
 - anti-discrimination legislation
 - consumer laws
 - ethical principles
 - extra-territoriality provisions of the Trade Practices Act
 - foreign investment limits
 - labour laws

REQUIRED SKILLS AND KNOWLEDGE

- | |
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| <ul style="list-style-type: none">• legal aspects of bilateral and multi-lateral trade agreements• privacy laws• taxation laws• World Trade Organization (WTO) dispute resolution system• organisational business and marketing plans, products and services• software applications used in conducting international electronic commerce. |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • documenting and presenting an evaluation of various international marketing opportunities including: <ul style="list-style-type: none"> • analysing the global business environment • assessing social, cultural, political and economic factors impacting on the selection of which market opportunities to select • conducting a risk assessment for each opportunity considered • analysing the financial viability of selected international marketing opportunities
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to information sources on countries and markets being considered for entry or further penetration • access to office equipment and resources • access to examples of previous international marketing evaluation documents, strategic plans and marketing plans.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • analysis of responses to case studies and scenarios • assessment of written reports on evaluation and selection of marketing opportunities • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • observation of presentations on market evaluation activities • observation of techniques used to identify and assess risks, and to financially analyse possible market opportunities • oral or written questioning to assess knowledge and

EVIDENCE GUIDE	
	<p>understanding</p> <ul style="list-style-type: none">• review of authenticated documents from the workplace or training environment• review of testimony from team members, colleagues, supervisors or managers
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none">• BSBMKG606B Manage international marketing programs• other marketing units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

International business and electronic commerce market factors may include:

- cost of funds
- cultural and political groupings
- currency exchange rates
- customer service factors
- distribution channels
- geographical groupings
- government assistance
- growth factors
- incentives
- industrial structure
- interest rates
- investment rates
- level of economic development
- online customer groupings
- political systems
- social and cultural factors
- tariffs
- technology and telecommunications infrastructure
- trade groupings
- trade relations with Australia
- trade restrictions
- virtual communities

International trade policies and agreements may include:

- customs unions
- bilateral trade agreements such as:
 - Australia-US Free Trade Agreement (AUSFTA)
 - Singapore-Australia Free Trade Agreement (SAFTA)
 - Thailand-Australia Free Trade Agreement (TAFTA)
 - Australia-New Zealand Closer Economic Relations Trade Agreement (ANZCERTA)

RANGE STATEMENT	
	<ul style="list-style-type: none"> • multi-lateral trade agreements such as the WTO agreements for goods, services and intellectual property, including: <ul style="list-style-type: none"> • agriculture • air transport • anti-dumping measures • customs valuation methods • financial services • health regulations for farm products • import licensing • investment measures • movement of natural persons • preshipment inspection • product standards • rules of origin • safeguards • shipping • subsidies and counter measures • telecommunications • textiles and clothing • other multi-lateral trade agreements such as: <ul style="list-style-type: none"> • European Union trade regulations
<i>International marketing opportunities</i> may include:	<ul style="list-style-type: none"> • agents • direct investment • exporting • intermediaries • joint ventures • licensing • online business opportunities • strategic alliances
<i>Social and cultural factors</i> may include:	<ul style="list-style-type: none"> • behaviours • currency • customs • family role and status • language • legal system • political system • preferences • social values

RANGE STATEMENT	
	<ul style="list-style-type: none"> • traditions
<i>Risk factors</i> may include:	<ul style="list-style-type: none"> • available technology • communication systems • corruption risks • cultural factors • financial stability • language factors • legal and regulatory requirements • legal risks in selling goods and services online to the international market • logistics • political stability • resource availability, sustainability and management • resource capability and capacity • telecommunications infrastructure • trade barriers • transportation systems • work factors
<i>Economic conditions</i> may include:	<ul style="list-style-type: none"> • depression • prosperity • recession • recovery

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Business Development - Marketing
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Co-requisite units

Co-requisite units		

BSBMKG608A Develop organisational marketing objectives

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to conduct a strategic analysis to develop organisational marketing objectives. This involves reviewing the organisation's internal and external environments, evaluating past and current marketing performance, and exploring and evaluating new marketing opportunities. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.
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Application of the Unit

Application of the unit	<p>This unit applies to senior marketing professionals who are responsible for providing strategic direction to the marketing function of an organisation. Their responsibilities include analysing information on the internal and external business and marketing environment; examining current marketing performance; identifying new marketing opportunities arising from emerging trends; and devising strategies to achieve overall business objectives.</p> <p>Individuals operating at this level will generally conduct these activities using information gathered by people working under their direct and indirect supervision at lower levels of the organisation.</p> <p>This unit should be assessed either before or in conjunction with BSBMKG609A Develop a marketing plan, which covers the skills and knowledge to devise specific marketing strategies and tactics arising from formulation of marketing objectives.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify strategic direction	<p>1.1. Confirm organisation's mission, vision, purpose and values from current organisational materials or from owners, directors or senior management</p> <p>1.2. Analyse <i>strategic organisational documents</i> to identify organisational directions and targets</p> <p>1.3. Complete a <i>situational analysis</i> that identifies factors impacting on the direction and performance of the business</p> <p>1.4. Identify <i>legal and ethical requirements</i> for the organisation</p> <p>1.5. Document and confirm the strategic direction of the organisation with owners, directors or senior management, and identify its impact on marketing activities</p>
2. Review marketing performance	<p>2.1. Evaluate the effectiveness of previous marketing and positioning strategies to identify lessons learned</p> <p>2.2. Analyse current key products or services and major markets for strengths, weaknesses, opportunities and threats</p> <p>2.3. Evaluate previous marketing opportunities captured by the organisation, and examine and document their profitability</p> <p>2.4. <i>Evaluate marketing performance</i> against previous objectives, targets to identify critical success factors, and areas for improvement</p>
3. Scope marketing opportunities	<p>3.1. Identify and analyse marketing opportunities in terms of their viability and likely contribution to the business</p> <p>3.2. Use an assessment of external factors, costs, benefits, risks and opportunities to determine the scope of each marketing opportunity</p> <p>3.3. Analyse opportunities in terms of their likely fit with organisational goals and capabilities</p> <p>3.4. Evaluate each opportunity to determine its likely impact on current business and customer base</p>
4. Formulate marketing objectives	<p>4.1. Develop objectives in consultation with <i>key internal stakeholders</i> that are attainable and measurable, and that identify the nature and extent of what is to be achieved</p> <p>4.2. Ensure objectives are consistent with the forecast</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>needs of the business and the market</p> <p>4.3. Ensure objectives are compatible with the organisation's projected capabilities, resources and financial position</p> <p>4.4. Ensure objectives are compatible with the organisation's direction and purpose, and meet legal and ethical requirements</p> <p>4.5. Formulate long term strategic objectives and related key performance indicators by product or service, market segment and overall</p> <p>4.6. Develop a risk management strategy to identify risks and manage contingencies, and to ensure that marketing objectives are met in accordance with overall organisational requirements</p> <p>4.7. Document marketing objectives</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to question, clarify and report
- information management skills to extract relevant details when conducting strategic analysis
- literacy skills to write in a range of styles for different audiences, and to interpret legal requirements and strategic organisational documents
- numeracy skills to analyse marketing performance data.

Required knowledge

- financial management techniques
- key provisions of relevant legislation from all forms of government, codes of practice and national standards that may affect aspects of business operations such as:
 - Australian Direct Marketing Association (ADMA) Direct Marketing Code of Practice
 - Australian E-commerce Best Practice Model
 - Australian Government Policy Framework for Consumer Protection in Electronic Commerce
 - confidentiality requirements
 - copyright laws
 - defamation laws
 - Free TV Australia Commercial Television Industry Code of Practice
 - anti-discrimination legislation and principles of equal opportunity, equity, and diversity
 - privacy laws
 - sweepstakes regulations
 - Trade Practices Act
- organisational structure, policies, procedures, products or services and overall strategic plans
- principles and concepts of marketing and evaluation methodologies
- strategic, operational and tactical analysis techniques.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • developing marketing objectives for an organisation including: <ul style="list-style-type: none"> • undertaking strategic analysis reviewing current marketing performance • formulating short and long term marketing objectives • developing a marketing risk management strategy.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to office equipment and resources • access to examples of previous strategic and marketing strategic, analyses and plans.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • analysis of responses to case studies and scenarios • assessment of written reports on strategic analysis conducted and formulated objectives • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • observation of presentations on marketing performance and objectives • oral or written questioning • review of authenticated documents from the workplace or training environment • review of testimony from team members, colleagues, supervisors or managers.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBMKG609A Develop a marketing plan • other marketing units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Strategic organisational documents</i> may include:</p>	<ul style="list-style-type: none"> • annual reports • codes of practice • company policy • customer service charter • security and privacy policies • strategic marketing plans • strategic plans
<p><i>Situational analysis</i> may include:</p>	<ul style="list-style-type: none"> • collaborators analysis • competitive analysis • environmental analysis • market analysis • market measurements • productivity or profitability analysis
<p><i>Legal and ethical requirements</i> may include:</p>	<ul style="list-style-type: none"> • codes of practice • cultural expectations and influences • environmental issues • ethical principles • health and safety of workplace personnel • legislation • policies and guidelines • regulations • security and privacy issues • social responsibilities • societal expectations
<p><i>Evaluating marketing performance</i> may include:</p>	<ul style="list-style-type: none"> • comparative analysis • competitive analysis • life cycle models • product portfolio analysis • strengths, weaknesses, opportunities, threats (SWOT) analysis • value chain analysis
<p><i>Key internal stakeholders</i> may</p>	<ul style="list-style-type: none"> • Board of directors

RANGE STATEMENT

include:

- finance staff
- human resources staff
- IT staff
- managers
- marketing personnel
- owners
- production staff
- supervisors

Unit Sector(s)

Unit sector

Competency field

Competency field

Business Development - Marketing

Co-requisite units

Co-requisite units

BSBMKG609A Develop a marketing plan

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to research, develop and present a marketing plan for an organisation.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals working in senior marketing positions who are responsible for formulating a marketing plan by developing specific marketing strategies and tactics in accordance with the organisation's overall marketing objectives.</p> <p>Individuals operating at this level may receive input from people working under their supervision who collect information required to devise specific marketing strategies and tactics.</p> <p>This unit builds on BSBMKG608A Develop organisational marketing objectives, which covers the skills and knowledge required to conduct a strategic analysis to formulate organisational marketing objectives.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Devise marketing strategies	<p>1.1. Evaluate marketing opportunity options that address organisational objectives, and evaluate their risks and returns in the selection process</p> <p>1.2. Develop marketing strategies that address strengths and opportunities within the organisation's projected capabilities and resources</p> <p>1.3. Develop strategies which increase resources or organisational expertise where gaps exist between current capability and marketing objectives</p> <p>1.4. Develop feasible marketing strategies and communicate reasons that justifies their selection</p> <p>1.5. Ensure strategies align with organisation's strategic direction</p> <p>1.6. Develop a marketing performance review strategy, incorporating appropriate marketing metrics to review of organisational performance against marketing objectives</p>
2. Plan marketing tactics	<p>2.1. Detail tactics to implement each marketing strategy in terms of scheduling, costing, accountabilities and persons responsible</p> <p>2.2. Identify coordination and monitoring mechanisms for scheduled activities</p> <p>2.3. Ensure tactics are achievable within organisation's projected capabilities and budget</p> <p>2.4. Ensure tactics meet legal and ethical requirements</p> <p>2.5. Ensure tactics provide for ongoing review of performance against objectives and budgets, and allow marketing targets to be adjusted if necessary</p>
3. Prepare and present a marketing plan	<p>3.1. Ensure marketing plan meets organisational, as well as marketing, objectives and incorporates marketing approaches and a strategic marketing mix</p> <p>3.2. Ensure marketing plan contains a rationale for objectives and information that supports the choice of strategies and tactics</p> <p>3.3. Present marketing plan for approval in the required format and timeframe</p> <p>3.4. Adjust marketing plan in response to feedback from key stakeholders and disseminate for implementation within the required timeframe</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- culturally appropriate communication skills to relate to people from diverse backgrounds and people with diverse abilities
- leadership skills to gain trust and confidence of colleagues and clients
- literacy skills to identify company and product or service information, to interpret strategic reports, to write in a range of styles for different audiences and to interpret legal requirements, company policies and procedures
- numeracy skills to analyse, create and manage budgets for marketing activities
- organisational and time management skills to sequence tasks and meet time lines
- presentation and facilitation skills to present a marketing plan.

Required knowledge

- organisational structure, products and services, overall strategic and marketing objectives
- key provisions of relevant legislation from all forms of government, codes of practice and national standards that may affect aspects of business operations such as:
 - anti-discrimination legislation and principles of equal opportunity, equity, and diversity
 - Australian Direct Marketing Association (ADMA) Direct Marketing Code of Practice
 - Australian E-commerce Best Practice Model
 - Australian Government Policy Framework for Consumer Protection in Electronic Commerce
 - confidentiality requirements
 - copyright laws
 - defamation laws
 - Free TV Australia Commercial Television Industry Code of Practice
 - privacy laws
 - sweepstakes regulations
 - Trade Practices Act
- industry products and services knowledge.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> devising, documenting and presenting a marketing plan detailing approaches and the marketing mix to achieve organisational marketing objectives.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to office equipment and resources access to strategic plans and marketing objectives.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> assessment of written marketing plans outlining marketing strategies and tactics to be used in achieving organisational marketing objectives demonstration of techniques used to develop marketing strategies in conjunction with relevant persons direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate observation of presentation of marketing plan to relevant persons oral or written questioning review of testimony from team members, colleagues, supervisors or managers.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> BSBMKG608A Develop organisational marketing objectives other marketing units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Marketing opportunity options</i> may include:</p>	<ul style="list-style-type: none"> • cooperative ventures • exports • extending, expanding or otherwise changing an existing business • franchising • joint ventures • new businesses • new products or services for existing markets • new products or services for new markets • potential for greater penetration of existing markets with existing products or services • strategic alliances • take-overs
<p><i>Marketing strategies</i> may include:</p>	<ul style="list-style-type: none"> • achieving lower costs of production and distribution than competitors • creating a very different product line or service so that the business becomes a class leader in the industry • distribution • pricing, presentation and display of products or services • product design and packaging • product range and mix • promotion and advertising • pursuing cost leadership or product differentiation within a specialist market segment
<p><i>Marketing performance review strategy</i> may include:</p>	<ul style="list-style-type: none"> • comparative analysis • competitive analysis • life cycle models • product portfolio analysis • strengths, weaknesses, opportunities, threats (SWOT) analysis

RANGE STATEMENT	
	<ul style="list-style-type: none"> • value chain analysis
<i>Legal and ethical requirements</i> may include:	<ul style="list-style-type: none"> • codes of practice • cultural expectations and influences • environmental issues • ethical principles • legislation • policies and guidelines • regulations • safety issues • security and privacy issues • social responsibilities • societal expectations
<i>Marketing approaches</i> may include:	<ul style="list-style-type: none"> • differentiated target marketing • direct marketing • direct response marketing • e-business • mass distribution • mass marketing • personal selling • product variety marketing • promotion marketing
<i>Marketing mix</i> may include:	<ul style="list-style-type: none"> • product or service variables such as: <ul style="list-style-type: none"> • technical features • design • quality • range • safety features • pricing • promotion • distribution • level of service

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Business Development - Marketing
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Co-requisite units

Co-requisite units		

BSBPMG510A Manage projects

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to manage a straightforward project or a section of a larger project.</p> <p>This unit addresses the management of projects including the development of a project plan, administering and monitoring the project, finalising the project and reviewing the project to identify lessons learnt for application to future projects.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>The unit focuses on the application of project management skills and the requirement to meet time lines, quality standards, budgetary limits and other requirements set for the project.</p> <p>The unit does not apply to specialist project managers. For specialist project managers, the units of competency in the Project Management competency field will be applicable.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Define project	1.1. Access <i>project scope and other relevant documentation</i> 1.2. Define project <i>stakeholders</i> 1.3. Seek clarification from <i>delegating authority</i> of any issues related to project and <i>project parameters</i> 1.4. Identify limits of own responsibility and reporting requirements 1.5. Clarify relationship of project to other projects and to the organisation's objectives 1.6. Determine and access available resources to undertake project
2. Develop project plan	2.1. Develop <i>project plan</i> including timelines, work breakdown structure, role and responsibilities and other details of how the project will be managed in relation to the project parameters 2.2. Identify and access appropriate <i>project management tools</i> 2.3. Formulate risk management plan for project, including occupational health and safety (OHS) 2.4. Develop and approve project budget 2.5. Consult team members and take their views into account in planning the project 2.6. Finalise project plan and gain any necessary approvals to commence project according to documented plan
3. Administer and monitor project	3.1. Take action to ensure project team members are clear about their responsibilities and the project requirements 3.2. Provide <i>support for project team members</i> , especially with regard to specific needs, to ensure that the quality of the expected outcomes of the project and documented time lines are met 3.3. Establish and maintain <i>required record keeping systems</i> throughout the project 3.4. Implement and monitor plans for managing project finances, resources (human, physical and technical) and quality 3.5. Complete and forward project reports as required to stakeholders 3.6. Undertake <i>risk management</i> as required to ensure

ELEMENT	PERFORMANCE CRITERIA
	project outcomes are met 3.7. Achieve project deliverables
4. Finalise project	4.1. Complete financial record keeping associated with project and check for accuracy 4.2. Assign staff involved in project to new roles or reassign to previous roles 4.3. Complete project documentation and obtain any <i>necessary sign offs</i> for concluding project
5. Review project	5.1. Review project outcomes and processes against the project scope and plan 5.2. Involve team members in the project review 5.3. Document lessons learnt from the project and report within the organisation

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication and negotiation skills to work with team members and other stakeholders to maintain project schedules
- literacy skills to read, write and review a range of documentation
- planning and organising skills to develop, monitor and maintain implementation schedules
- numeracy skills to analyse data, and to compare time lines and promotional costs against budgets
- culturally appropriate communication skills to relate to people from diverse backgrounds and people with diverse abilities.

Required knowledge

- relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - environmental issues
 - OHS
- organisational structure, and lines of authority and communication within the organisation
- how the project relates to organisation's overall mission, goals, objectives and operations.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • development of a project plan • details of monitoring arrangement/s and evaluation of the project plan's efficacy to address time lines and budgets of project • knowledge of relevant legislation.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to workplace project documentation.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • observation of presentations • oral or written questioning to assess knowledge of how the project relates to the organisation's overall mission, goals, objectives and operations • review of project risk management plan and project plan • evaluation of project reports forwarded to stakeholders • analysis of documentation reviewing project outcomes and processes against the project scope and plan • evaluation of documentation outlining lessons learnt from the project.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • other project management units.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><i>Project scope and other relevant documentation</i> may include:</p>	<ul style="list-style-type: none"> • contract or other agreement • project brief • project plan or summary • other documents outlining expected outcomes of the project, inclusions and exclusions from project, timeframes for project, quality standards for project, project resources
<p><i>Stakeholders</i> may include:</p>	<ul style="list-style-type: none"> • clients or customers (internal and external) • funding bodies • management, employees and relevant key personnel (internal and external) with special responsibilities • project sponsor
<p><i>Delegating authority</i> may include:</p>	<ul style="list-style-type: none"> • customer or client • funding body • manager or management representative • project sponsor
<p><i>Project parameters</i> may include:</p>	<ul style="list-style-type: none"> • finances for project • integration of project within organisation • legislative and quality standards • physical, human and technical resources available or required for project • procurement requirements associated with project • reporting requirements • risks associated with project, including OHS • scope of project • time lines
<p><i>Project management tools</i> may include:</p>	<ul style="list-style-type: none"> • cost schedule control system • Critical Path Method • Gantt and bar charts • life cycle cost analysis • logistics support analysis

RANGE STATEMENT	
	<ul style="list-style-type: none"> • PERT charts • project management software • spreadsheets • technical resources required for the project, for example OHS management system tools
<i>Support for project team members</i> may include:	<ul style="list-style-type: none"> • additional physical, human and technical resources (within allocated budget) if and as required • encouragement • feedback • learning and development • regular project team meetings • supervision, mentoring and coaching
<i>Required record keeping systems</i> may include systems for:	<ul style="list-style-type: none"> • correspondence • financial data including costs, expenditure, income generated, purchases • project outcomes • quality data including any test results • recording of time spent on project and progress in completing project • samples, prototypes, models
<i>Risk management</i> may include:	<ul style="list-style-type: none"> • changing roles and responsibilities within project team • negotiating an extension of deadline, or redefining completion or quantities or quality of outcomes • outsourcing some aspects of the project • reducing costs • researching and applying more efficient methods for completing project tasks • seeking further resources to meet deadline • sharing of ideas to gain improvements to work undertaken within the project
<i>Necessary sign offs</i> may be required by:	<ul style="list-style-type: none"> • clients, customers • funding body • management • project sponsor

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units		

BSBPRO301A Recommend products and services

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to provide advice and information within an organisation about the development and distribution of its products and services.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who are skilled operators and apply a broad range of competencies in various work contexts. They may exercise discretion and judgement using appropriate knowledge of products and services to provide technical advice and support to a team.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop and maintain knowledge of products and services	1.1. Actively and regularly research knowledge and understanding of <i>industry products and services</i> using <i>authoritative sources</i> 1.2. Use available <i>product and service documentation</i> to identify and understand characteristics of products and services, and to make comparisons with other products and services 1.3. Accurately document and maintain <i>information</i> on products and services in a format consistent with <i>organisational requirements</i> 1.4. Apply acquired knowledge to improve quality within personal work areas
2. Recommend products and services	2.1. Ensure that recommendations on products and services are in line with organisational requirements 2.2. Provide recommendations that emphasise <i>product and service issues</i> relevant to client needs 2.3. Ensure that evidence in support of recommendations is verifiable and presented in a suitable format 2.4. Structure recommendations to identify clear benefits to clients and the organisation
3. Advise on promotional activities	3.1. Provide advice that is clear, is supported by verifiable evidence and is compatible with organisational requirements 3.2. Ensure that promotional documentation and materials are appropriate to presentation of the organisation's products and services 3.3. Ensure that costs of promotional activities conform to budget resources 3.4. Estimate impact of <i>promotional activities</i> from <i>verifiable customer feedback sources</i> 3.5. Evaluate the benefits of promotional activities and incorporate in plans for future promotional activities

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to read and understand a variety of texts; to prepare general information and papers according to target audience; and to edit and proofread texts to ensure clarity of meaning, and accuracy of grammar and punctuation
- technology skills to select and use technology appropriate to a task
- communication skills to monitor and advise on customer service strategies
- problem-solving skills to deal with customer enquiries or complaints
- analytical skills to identify trends and positions of products and services.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
 - ethical principles
 - codes of practice
 - privacy laws
 - occupational health and safety (OHS)
- organisation's products and services
- organisational policies and procedures for customer service including handling customer complaints
- product and service standards and best practice models
- principles and techniques of public relations and product promotion
- mechanisms to obtain and analyse customer feedback.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • assessing and reporting on customer satisfaction • identifying commercial characteristics of products and services • knowledge of product and service standards and best practice models. • preparing and structuring advice on products and services • researching market availability of products and services.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of promotional strategies • examples of documents relating to customer service standards and policies.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • analysis of responses to case studies and scenarios • assessment of written reports • demonstration of techniques • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • evaluation of promotional activities plans • observation of performance in role plays • observation of presentations • oral or written questioning to assess knowledge of promotional strategies and sources of product information • review of documentation outlining information on

EVIDENCE GUIDE	
	<p>products and services</p> <ul style="list-style-type: none">• review of products and services recommendations.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none">• sales and/or customer service units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Industry products and services</i> may include:</p>	<ul style="list-style-type: none"> • competitor products and services • complementary products and services • emerging products and services • historical products and services • organisation's products • specified range of products and services within an organisation's offerings
<p><i>Authoritative sources</i> may include:</p>	<ul style="list-style-type: none"> • authorised suppliers • industry associations • industry conferences • recognised industry media sources
<p><i>Product and service documentation</i> may include:</p>	<ul style="list-style-type: none"> • colleagues' knowledge • consumer reports • industry reports • marketing data • operational guidelines • sales figures
<p><i>Information</i> may include:</p>	<ul style="list-style-type: none"> • competitive features of products or services • cost and production data • distribution processes • innovations • problems with products or services • product trends • sales records (monthly forecasts, targets achieved) • sales trends
<p><i>Organisational requirements</i> may include:</p>	<ul style="list-style-type: none"> • access and equity principles and practice • confidentiality and security requirements • defined resource parameters • ethical standards • filing and documentation storage processes • goals, objectives, plans, systems and processes

RANGE STATEMENT	
	<ul style="list-style-type: none"> • legal and organisational policies, guidelines and requirements • OHS policies, procedures and programs • payment and delivery options • pricing and discount policies • quality and continuous improvement processes and standards • quality assurance and/or procedures manuals • replacement and refund policy and procedures • who is responsible for products or services
<i>Product and service issues</i> may include:	<ul style="list-style-type: none"> • customer delivery • faults • market share data • organisational product knowledge • production down-time • sales figures
<i>Promotional activities</i> may include:	<ul style="list-style-type: none"> • advertisements • client functions • employee functions • media announcements • product launches • web pages
<i>Verifiable customer feedback sources</i> may include:	<ul style="list-style-type: none"> • audit documentation and reports • complaints • customer satisfaction questionnaires • lapsed clients • quality assurance data • returned goods • service calls

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Industry Capability - Product Skills and Advice
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Co-requisite units

Co-requisite units		

BSBPRO401A Develop product knowledge

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to develop product knowledge in preparation for the sales process.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals in a sales related position in a small, medium or large enterprise across a wide variety of industries and contexts who develop their product knowledge prior to undertaking selling activities. They may provide advice and support about aspects of sales solutions to support a sales team.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Acquire knowledge of products in a specified area	1.1. Identify <i>information sources</i> about <i>products</i> in a specified area and evaluate them for reliability and validity 1.2. Identify product purpose/s and use/s 1.3. Identify key <i>features</i> of the product/s 1.4. Identify product strengths and weaknesses 1.5. Articulate guarantees and warranties and identify service support details
2. Convert product knowledge into benefits	2.1. Identify features of the product which have potential buyer appeal 2.2. Present features of the product which have buyer appeal as benefits to the buyer 2.3. Present product benefits within the context of <i>organisational requirements</i> and legislation
3. Evaluate competitors' products	3.1. Use a range of information sources to identify competitors' products 3.2. Compare features, benefits, strengths and weaknesses of competitors' products with own products 3.3. Establish relative standing of the organisation's product with the competitors' product/s and communicate differences to the buyer

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- information management skills to summarise information verbally and non-verbally
- literacy and numeracy skills to interpret sales data and to summarise information obtained from a variety of verbal and non-verbal sources.

Required knowledge

- features, benefits, strengths and weaknesses of own organisation's and competitors' products
- industry competitors, trends and developments
- organisational structure/s, roles and responsibilities, policies, procedures, product labelling and descriptions
- potential buyer markets
- processes used when buying and selling products and services
- identification and overview knowledge of key provisions of relevant legislation from all levels of government that affects business operations, codes of practice and national standards, such as:
 - anti-discrimination
 - consumer protection
 - contract law legislation
- ethical principles
 - privacy laws
 - Trade Practices Act.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • comparison of the key features and benefits of product/s with competitor offerings • demonstration of product knowledge offered by an organisation • presentation of key features and benefits of own product/s.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to information sources about an organisation's and competitors' products, services or ideas • access to office equipment and resources.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • observation of presentation of key features and benefits to customers or simulated customers • oral or written questioning to assess knowledge of features, benefits, strengths and weaknesses of organisation's and competitors' products • review of evaluation of identification of information sources about products in a specified area • evaluation of strengths and weaknesses established for competitors' products.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBSLS402A Identify sales prospects • BSBSLS403A Present a sales solution

EVIDENCE GUIDE

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| <ul style="list-style-type: none">• BSBSLS405A Support post-sale activities |
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Information sources</i> may include:	<ul style="list-style-type: none"> • associations • catalogues • claims of competitive sales people • competitor websites • competitor sales literature • external sales data sources such as warehouse withdrawals • internal sales data records • other company personnel • sales conventions • trade association magazines • trade shows
<i>Products</i> may include:	<ul style="list-style-type: none"> • goods • ideas • services
<i>Features</i> may include:	<ul style="list-style-type: none"> • brand • colour • country of origin • covenant • manufacturer • product care details • safety aspect • shelf life • size • style • warnings
<i>Organisational requirements</i> may include:	<ul style="list-style-type: none"> • level of client service required • policies and procedures which are formally documented and are available for reference within the workplace

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Business Development - Sales
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Co-requisite units

Co-requisite units		

BSBRKG304B Maintain business records

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to maintain the records of a business or records system in good order on a day to day basis.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals requiring some understanding of relevant theoretical knowledge relating to recordkeeping functions. It is not assumed that individuals at this level would have responsibility for supervising the work of others; however it is assumed that as a recordkeeping practitioner their work will support effective recordkeeping and governance practices across the organisation.</p> <p>The application is in relation to the maintenance of records from an existing business or records system that has guidelines and processes to assist in the process. Work carried out in the interest of system maintenance will be performed under supervision or in consultation with more senior staff or users of the system.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Collate business records	1.1. Identify individual <i>records</i> or <i>information</i> which should be incorporated into <i>business or records system</i> according to organisational criteria 1.2. Sort records in accordance with workplace requirements 1.3. Adhere to <i>security and access requirements</i> in accordance with organisational procedures
2. Update business or records system	2.1. Identify and record control information for describing new records to be incorporated into business or records system 2.2. Update control information describing movement or use of records within business or records system 2.3. Accurately record and update control information in business or records system 2.4. Identify and remove records of completed business activities from current system for disposal
3. Prepare reports from the business or records system	3.1. Interpret requests for <i>reports</i> and clarify the content and frequency sought, where necessary 3.2. Prepare reports from business or records system in accordance with instructions or request 3.3. Prepare reports in accordance with organisational security and access procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to explain and clarify procedures, and to interview users to identify their records/information needs
- literacy skills to read and interpret nature of record content, functions and problems
- problem-solving and analysis skills to identify and manage records.

Required knowledge

- key provisions of relevant legislation from all forms of government, regulations, standards and documentation that may affect aspects of business operations, such as:
 - AS 5044.1:2002 AGLS Metadata element set
 - AS 5090:2003 Work process analysis for recordkeeping
 - AS ISO 15489:2004 Records management
 - AS ISO 23081.1:2006 Information and documentation - Records management processes - Metadata for records - Principles
 - Australian Stock Exchange(ASX) Principles of Good Corporate Governance
 - ethical principles
 - codes of practice
 - privacy and freedom of information
 - archives and records legislation
 - occupational health and safety
- general principles and processes of records management and records management systems, such as:
 - systems of control
 - records continuum theory
 - mandate and ownership of business process
 - environmental context
 - records characteristics.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • complying with organisational procedures and workplace requirements • knowledge and understanding of business or records systems • accurately recording information.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated work environment • access to office equipment and resources • access to examples of records, recordkeeping systems and policies • access to workplace reference materials such as procedural manuals and company policies.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • analysis of responses to case studies and scenarios • demonstration of techniques • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • review of authenticated documents from the workplace or training environment • oral or written questioning to assess knowledge of general principles and processes of business or records systems.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • administration units • other knowledge management units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Records</i> may be:</p>	<ul style="list-style-type: none"> • at different stages of use: <ul style="list-style-type: none"> • active • archival • digital: <ul style="list-style-type: none"> • remote drives • servers • CDs • DVDs • imaging systems • PC-based applications • mainframe • physical: <ul style="list-style-type: none"> • audio-visual or multimedia • graphic • microform • paper-based (acid free or multiple copies) • from a variety of sources: <ul style="list-style-type: none"> • already in the custody of the organisation • in the process of being transferred between organisations
<p><i>Information</i> may include:</p>	<ul style="list-style-type: none"> • customer relationship management • expenditure • human resources management • invoicing/sales • legislative/regulatory/licensing compliance • risk management • stock control • taxation, asset management
<p><i>Business or records systems</i> may be:</p>	<ul style="list-style-type: none"> • archival control systems • business systems • cash register-based systems

RANGE STATEMENT	
	<ul style="list-style-type: none"> • characteristics relating to: <ul style="list-style-type: none"> • aggregations • context • entities • metadata • current business or records systems • electronic records and document management system (ERDMS) • informal • paper-based accumulation and card systems • PC-based accounting systems, employee and tax records systems • proprietary recordkeeping package • storage facilities systems • systems unique to individual workplaces and organisations
<i>Security and access requirements</i> may relate to:	<ul style="list-style-type: none"> • individuals or positions of individuals • protection of privacy • security restrictions • trade secrets or commercial-in-confidence information
<i>Reports</i> may be:	<ul style="list-style-type: none"> • ad hoc • computer generated • hand prepared • part of a management solution for another support/operational function • regular records management reports • system management reports

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Knowledge Management - Recordkeeping
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Co-requisite units

Co-requisite units	

BSBRSK501A Manage risk

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to manage risks in a range of contexts across the organisation or for a specific business unit or area.</p> <p>The unit has been designed to be consistent with AS/NZS 4360:2004 Risk management.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit addresses the management of the risk across the organisation or within a business unit or area. It does not assume any given industry setting.</p> <p>This unit applies to individuals who are working in positions of authority and are approved to implement change across the organisation, business unit, program or project area. They may or may not have responsibility for directly supervising others.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish risk context	1.1. Review organisational processes, procedures and requirements for undertaking <i>risk</i> management 1.2. Determine <i>scope</i> for risk management process 1.3. Identify internal and external stakeholders and their issues 1.4. Review political, economic, social, legal, technological and policy context 1.5. Review strengths and weaknesses of existing arrangements 1.6. Document critical success factors, goals or objectives for area included in scope 1.7. Obtain support for risk management activities 1.8. Communicate with <i>relevant parties</i> about the risk management process and invite participation
2. Identify risks	2.1. Invite relevant parties to assist in the identification of risks 2.2. <i>Research</i> risks that may apply to scope 2.3. Use <i>tools and techniques</i> to generate a list of risks that apply to the scope, in consultation with relevant parties
3. Analyse risks	3.1. Assess <i>likelihood</i> of risks occurring 3.2. Assess <i>impact or consequence</i> if risks occur 3.3. <i>Evaluate</i> and prioritise risks for treatment
4. Select and implement treatments	4.1. Determine and select most appropriate <i>options</i> for treating risks 4.2. Develop an <i>action plan</i> for implementing risk treatment 4.3. Communicate risk management processes to relevant parties 4.4. Ensure all documentation is in order and appropriately stored 4.5. Implement and monitor action plan 4.6. Evaluate risk management process

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication and literacy skills to consult and negotiate, to prepare communications about risk management, and to encourage stakeholder involvement
- organisational and management skills to plan and implement risk management processes
- problem-solving and innovation skills to find practical ways to manage identified risks.

Required knowledge

- AS/NZS 4360:2004 Risk management.
- legislation, codes of practice and national standards, for example:
 - duty of care
 - company law
 - contract law
 - environmental law
 - freedom of information
 - industrial relations law
 - privacy and confidentiality
 - legislation relevant to organisation's operations
 - legislation relevant to operation as a business entity
- organisational policies and procedures, including:
 - risk management strategy
 - policies and procedures for risk management
- overall operations of organisation
- reasonable adjustment in the workplace for people with a disability
- types of available insurance and insurance providers.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • risk management plan which includes a detailed stakeholder analysis, explanation of the risk context, critical success factors, identified and analysed risks, and treatments for prioritised risks • details of monitoring arrangements for risk management plan and an evaluation of the risk management plan's efficacy in treating risks • knowledge of relevant legislation, codes of practice and national standards.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to workplace documentation.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • observation of presentations • oral or written questioning to assess knowledge of risk management policies and procedures • review of documented critical success factors, and goals or objectives for area • review of risks prioritised for treatment • evaluation of action plan for implementing risk treatment • evaluation of documentation communicating risk management processes to relevant parties.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • financial management units, governance units, human resource management units, or technology

EVIDENCE GUIDE	
	units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Risks</i> may include those relating to:	<ul style="list-style-type: none"> • commercial relationships • economic circumstances and scenarios • human behaviour • individual activities • legislation • management activities and controls • natural events • political circumstances • technology
<i>Scope</i> may apply to:	<ul style="list-style-type: none"> • given project • specific business unit or area • specific functional such as: <ul style="list-style-type: none"> • financial management • OHS • governance • external environment • internal environment • whole organisation
<i>Relevant parties</i> may include:	<ul style="list-style-type: none"> • all staff • internal and external stakeholders • senior management • specific teams or business units • technical experts
<i>Research</i> may include:	<ul style="list-style-type: none"> • data or statistical information • information from other business areas • lessons learned from other projects or activities • market research • previous experience • public consultation • review of literature and other information sources
<i>Tools and techniques</i> may	<ul style="list-style-type: none"> • brainstorming

RANGE STATEMENT	
include:	<ul style="list-style-type: none"> • checklists • fishbone diagrams • flowcharts • scenario analysis
Likelihood may refer to:	<ul style="list-style-type: none"> • probability of a given risk occurring, such as: <ul style="list-style-type: none"> • very likely • likely • possible • unlikely • rare
Impact or consequence may refer to:	<ul style="list-style-type: none"> • significance of outcomes if the risk occurs, such as: <ul style="list-style-type: none"> • disastrous • severe • moderate impact • minimal impact
Evaluation of risks includes:	<ul style="list-style-type: none"> • considering the likelihood of the risk occurring • considering the impact of the risk • determining which risks are most significant and are therefore priorities for treatment
Options may include:	<ul style="list-style-type: none"> • avoiding the risk • changing the consequences • changing the likelihood • retaining the risk • sharing the risk with a third party
Action plans should include:	<ul style="list-style-type: none"> • what actions are required • who is taking responsibility • time lines • monitoring processes

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Management
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Co-requisite units

Co-requisite units		

BSBSMB401A Establish legal and risk management requirements of small business

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to identify and comply with the regulatory, legal, taxation and insurance requirements, and risk management needs of small business.</p> <p>Specific legal requirements apply to the management of a small business.</p>
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Application of the Unit

Application of the unit	<p>This work is undertaken by individuals who operate a small business.</p> <p>The unit is suitable for existing micro and small businesses or setting up a new business or a department in a larger organisation.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and implement business legal requirements	1.1. Identify and research possible <i>options for the business legal structure</i> using <i>appropriate sources</i> 1.2. Determine <i>legislation and regulatory requirements</i> affecting the operations of the business under its chosen structure 1.3. Develop and implement procedures to ensure full compliance with relevant legislation and regulatory requirements
2. Comply with legislation, codes and regulatory requirements	2.1. Establish systems to ensure the <i>legal rights and responsibilities</i> of the business are identified and the business is adequately protected, specifically in relation to <i>occupational health and safety (OHS)</i> , business registration and environmental requirements 2.2. Identify <i>taxation principles and requirements</i> relative to the business and follow procedures to ensure compliance 2.3. Identify and carefully maintain <i>legal documents</i> and maintain and update relevant <i>records</i> to ensure their ongoing security and accessibility 2.4. Monitor the provision of products and services of the business to protect legal rights and to comply with legal responsibilities 2.5. Conduct investigations to identify areas of non-compliance with legal and regulatory requirements and take corrective action where necessary
3. Negotiate and arrange contracts	3.1. Seek legal advice on contractual rights and obligations, if required, to clarify business liabilities 3.2. Investigate and assess potential products/services to determine <i>procurement rights</i> and to ensure protection of business interests where applicable 3.3. Negotiate and secure contractual procurement rights for goods and services including <i>contracts with relevant people</i> , as required, in accordance with the business plan 3.4. Identify <i>insurance requirements</i> and acquire adequate cover 3.5. Identify options for leasing/ownership of business premises and complete contractual arrangements in accordance with the business plan

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication, reporting, record keeping and consultation skills to operate the business
- literacy skills to interpret legal requirements, to develop policies and procedures and to analyse compliance information
- research skills to investigate legal structures, and taxation and insurance requirements
- time management skills to prioritise tasks and to meet key dates.

Required knowledge

- business registration and licensing requirements
- commonwealth, state/territory and local government legislative requirements relating to business operation, especially in regard to OHS and environmental issues, equal employment opportunity, industrial relations, anti-discrimination, taxation
- creation and termination of relevant legal contracts
- cultural differences and legal implications
- duty of care imposed by Law of Torts
- legal rights and obligations of alternative ownership structures
- record keeping to meet minimum legal and taxation requirements
- relevant consumer legislation
- relevant industry codes of practice
- relevant insurance requirements and products.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • implementation of a systematic approach to identifying, managing and meeting legal and business requirements within culturally appropriate contexts • interpreting compliance data and formulating appropriate action • knowledge of relevant legislation.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to relevant documentation • candidate's individual circumstances and work in the context of establishing or running a small business, are the basis for assessment.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • portfolio of evidence including contracts negotiated and arranged • oral or written questioning to assess knowledge of relevant consumer legislation • review of procedures developed and implemented to ensure full compliance with relevant legislation and regulatory requirements • review of insurance cover acquired.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBSMB402A Plan small business finances • BSBSMB404A Undertake small business planning.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Options for the business legal structure</i> may include:</p>	<ul style="list-style-type: none"> • company • cooperative • corporation • government owned enterprise • partnership • profit or not-for-profit legal structure • sole trader • trust
<p><i>Options for the business legal structure</i> may be influenced by:</p>	<ul style="list-style-type: none"> • confidentiality • contractual requirements • family/community/cultural expectations • ownership transfer • partnership considerations • preferences of owners/stakeholders • protection of stakeholders and assets • requirements of financial backers • superannuation • taxation
<p><i>Appropriate sources</i> may include:</p>	<ul style="list-style-type: none"> • business advisers • financial planners • government agencies • industry/trade associations • mentors • professional advisers (e.g. solicitors, accountants)
<p><i>Legislation and regulatory requirements</i> may include:</p>	<ul style="list-style-type: none"> • local, state/territory, commonwealth and international legislation, regulations and codes of practice affecting business operations such as: <ul style="list-style-type: none"> • relevant Acts and regulations • industry and OHS codes of practice • business registrations and licences

RANGE STATEMENT	
	<ul style="list-style-type: none"> • planning and other permissions • environmental legislation • industrial law, agency law, property law, consumer legislation and standards, Torts Law and duty of care • equal employment opportunity (EEO) and anti-discrimination legislation, anti-competition regulations
<i>Legal rights and responsibilities</i> may include:	<ul style="list-style-type: none"> • culturally appropriate processes and protocols • marketing the business in accordance with consumer legislation • obligations imposed by choice of business structure • operating the business with a duty of care (Law of Torts)
<i>Occupational health and safety and requirements</i> must include:	<ul style="list-style-type: none"> • complying with relevant OHS codes of practice • establishing and maintaining a system for managing OHS • establishing hazard management arrangements to assess and control the risks associated with workplace hazards including development of written safe operating procedures • establishing OHS record keeping arrangements in accordance with regulatory requirements • OHS duty of care responsibilities • registering with state/territory workers compensation authority if applicable
<i>Taxation principles and requirements</i> may include:	<ul style="list-style-type: none"> • relevant taxation requirements/obligations for business • tax file number, Australian Business number, goods and services tax registration, PAYG and withholding arrangements
<i>Legal documents</i> may include:	<ul style="list-style-type: none"> • appropriate software for financial records • certificate of incorporation • constitution documents • franchise agreements and financial documentation • partnership agreements • statutory books for companies (register of members, register of directors and minute books)

RANGE STATEMENT	
Records may include:	<ul style="list-style-type: none"> • environmental • financial • OHS • personnel • taxation
OHS records may include:	<ul style="list-style-type: none"> • accident reports and investigations • first aid and medical • hazardous substances register • instruction and training • manufacturers' and suppliers' information • material safety data sheets • OHS audits and inspections • plant maintenance and testing • workers compensation and rehabilitation
Procurement rights to products and services may include:	<ul style="list-style-type: none"> • any form of licensing • royalties, copyright, patents, trademarks, registered design and applications, intellectual property, software licenses, franchises, agencies
Contracts with relevant people may include:	<ul style="list-style-type: none"> • any person with whom the business has, or seeks to have, a performance-based relationship • owners, suppliers, employees, landlords, agents, distributors, customers
Insurance requirements may include:	<ul style="list-style-type: none"> • comprehensive insurance for vehicles/property • professional indemnity insurance • public liability insurance • third party insurance on motor vehicles • workers compensation • other insurance cover as required by state/territory or commonwealth legislation, contractual obligations or as recommended for the industry/type of business

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Small and Micro Business
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Co-requisite units

Co-requisite units		

BSBSMB402A Plan small business finances

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to develop a financial plan to support business viability.</p> <p>Specific legal requirements apply to the management of a small business.</p>
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Application of the Unit

Application of the unit	<p>This work is undertaken by individuals who operate a small business.</p> <p>The unit is suitable for existing micro and small businesses or a department in a larger organisation.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify costs, calculate prices and prepare profit statement	1.1. Identify and document <i>costs</i> associated with the production and delivery of the business' products/services 1.2. Calculate prices based on costs and profit margin, as an hourly charge out rate for labour or unit price for products 1.3. Calculate break-even sales point to establish business viability and profit margins 1.4. Identify appropriate <i>pricing strategies</i> in relation to market conditions to meet business profit targets 1.5. Prepare projected profit statement to supplement the business plan
2. Develop a FINANCIAL PLAN	2.1. Set <i>profit targets/goals</i> to reflect owner's desired returns 2.2. Identify working capital requirements necessary to attain profit projections 2.3. Identify non-current asset requirements and consider alternative asset management strategies 2.4. Prepare <i>cash flow projections</i> to enable business operation in accordance with business plan and <i>legal requirements</i> 2.5. Identify capital investment requirements accurately for each operational period 2.6. Select budget targets to enable ongoing monitoring of financial performance
3. Acquire finance	3.1. Identify start-up and ongoing financial requirements according to financial plan/budget 3.2. Identify <i>sources of finance</i> , including potential <i>financial backers</i> , to provide required liquidity for the business to complement business goals and objectives 3.3. Investigate cost of securing finance on optimal terms 3.4. Identify strategies to obtain finance as required to ensure financial viability of the business

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to interpret financial data
- communication skills to secure finance
- literacy skills to develop a financial plan and to interpret legal requirements and financial reports
- numeracy skills to calculate costs, prices, profit and other financial information
- research skills to identify costs and sources of finance.

Required knowledge

- break-even analysis
- costing for the business, including margin/mark-up, hourly charge out rates and unit costs
- financial decision making relevant to the business
- methods and relative costs of obtaining finance
- principles for preparation of balance sheets
- principles for preparation of cash flow forecasts
- principles for preparation of profit and loss statements
- purpose of financial reports
- relevant accounting terminology
- working capital cycles.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> development of a financial plan which identifies the financial requirements of the business, including profit targets, cash flow projections and strategies for the acquisition of finance knowledge of financial decision making relevant to the business.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to relevant documentation candidate's individual circumstances and work in the context of establishing or running a small business, are the basis for assessment.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> portfolio of evidence including financial plan and records review of projected profit statement prepared to supplement the business plan review of cash flow projections oral or written questioning to assess knowledge of principles for preparation of cash flow forecasts.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> BSBSMB401A Establish legal and risk management requirements of small business BSBSMB404A Undertake small business planning BSBSMB405A Monitor and manage small business operations BSBSMB406A Manage small business finances.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Costs may include:

- direct/indirect costs
- fixed, variable, semi-variable costs
- overheads and employee costs

Pricing strategies may include:

- competitor analysis
- cost/volume/profit analysis
- cost factors
- cost plus pricing
- demand-based pricing
- discounting
- market conditions
- penetration pricing
- perceived value
- product mix
- skimming

Financial plan may include:

- analysis of sales by product/service, identifying where they were sold and to whom
- cash flow estimates for each forward period
- current financial state of the enterprise (or owner/operator)
- estimates of profit and loss projections for each forward period
- financial performance to date (if applicable)
- likely return on investment
- monthly, quarterly or annual returns
- non-recurrent assets calculations
- profit, turnover, capital and equity targets
- projected profit targets, pricing strategies, margins
- projections of likely financial results (budgeting)
- projections, which may vary depending on the importance of such information and the stage in the life of the business
- resources required to implement the proposed marketing and production strategies (staff,

RANGE STATEMENT	
	<ul style="list-style-type: none"> materials, plant and equipment) • review of financial inputs required (sources and forms of finance) • risks and measures to manage or minimise risks • working, fixed, debt and equity capital • working in conjunction with external consultants e.g. investment analysts, accountants, financiers
<i>Profit targets/goals</i> may include:	<ul style="list-style-type: none"> • break-even point • cost of goods/services sold • gross profit/net profit • desired actual/notional salary for owners/managers • desired return on investment • sales turnover/gross fees or income
<i>Cash flow projections</i> may include:	<ul style="list-style-type: none"> • anticipated payments • anticipated receipts • customer credit policy/debt recovery • taxation provisions
<i>Legal requirements</i> may include:	<ul style="list-style-type: none"> • contractual arrangements (partnership agreements, trust deeds) • corporations law • industrial law (for payroll records) • taxation law
<i>Sources of finance</i> may include:	<ul style="list-style-type: none"> • personal, financial institutions, trade/industry sources • government sources, for example commonwealth and state/territory governments which provide various forms of technical and financial assistance including direct cash grants, loans, subsidies, tax concessions, and professional and technical advice
<i>Financial backers</i> may include:	<ul style="list-style-type: none"> • financiers/banks/lending institutions • leasing and hire purchase financiers • providers of venture capital • shareholders/partners/owners/family/friends

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Small and Micro Business
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Co-requisite units

Co-requisite units		

BSBSMB403A Market the small business

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to develop and implement marketing strategies, and to monitor and improve market performance.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This work is undertaken by individuals who operate a small business.</p> <p>This unit is suitable for micro and small businesses or a department in a larger organisation.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop marketing strategies	1.1. Analyse the business and its key products or services to determine the focus of marketing activities, in accordance with the objectives of the business plan 1.2. Evaluate the customer base and target market for the small business as a basis for the marketing objectives and strategies 1.3. Determine marketing objectives and strategies that are ethically and culturally appropriate, in consultation with relevant people and in accordance with the business plan
2. Determine a marketing mix for the business	2.1. Balance product mix, volumes and pricing to optimise sales and profit 2.2. Evaluate the costs and benefits of using different distribution channels and/or providing different levels of customer service and consider the results in determining the marketing mix 2.3. Determine promotional activities to suit the target market 2.4. Consider customer needs and preferences in determining the marketing mix 2.5. Determine the marketing mix according to market and business needs
3. Implement marketing strategies	3.1. Brief persons involved in the marketing effort on their roles and responsibilities, to ensure the success of marketing strategies 3.2. Plan and implement promotional activities , in accordance with marketing objectives and budgetary requirements
4. Monitor and improve marketing performance	4.1. Monitor marketing activities and evaluate business performance according to the objectives and targets of the business plan 4.2. Analyse performance gaps and take corrective action or set new targets 4.3. Encourage all relevant people to propose ways to improve marketing performance 4.4. Seek and analyse customer reaction to all aspects of the marketing mix, using culturally appropriate processes, to improve targeting and outcomes 4.5. Conduct ongoing research of customer requirements to identify opportunities for change and

ELEMENT	PERFORMANCE CRITERIA
	improvement 4.6. Monitor and investigate changes in the market for new opportunities to aid business development

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to question, clarify and report
- literacy and numeracy skills to research information, to analyse data and to interpret market data.

Required knowledge

- industry market trends
- methods of analysing costs and benefits of marketing strategies
- methods of developing marketing objectives and marketing mix
- methods of monitoring customer satisfaction
- relevant market analysis and research
- relevant marketing concepts and methods.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • developing a marketing strategy and choosing a marketing mix for the small business that are culturally appropriate and that complement the business plan • implementing and monitoring the marketing strategy/plan to optimise the chances of small business success • knowledge of relevant marketing concepts and methods.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to relevant documentation • candidate's individual circumstances and work in the context of running a small business, are the basis for assessment.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • portfolio of evidence including marketing strategy and monitoring of marketing performance • oral or written questioning to assess knowledge of industry market trends • review of analysis of performance gaps and corrective action taken or new targets set • review of promotional activities implemented.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBSMB404A Undertake small business planning.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Marketing objectives and strategies</i> may include:</p>	<ul style="list-style-type: none"> • achieving lower costs of production and distribution than competitors • creating a very different product line or service so that the business becomes a class leader in the industry • distribution • pricing, presentation and display of products/services • product design and packaging • product range and mix • promotion and advertising • pursuing cost leadership and/or product differentiation within a specialist market segment
<p><i>Relevant people</i> may include:</p>	<ul style="list-style-type: none"> • accountant or other specialist services • family members, work team members, sub-contractors, community members • franchise agency • financial backers, clients • owner/operator, partners, directors, shareholders • regulatory bodies • trade or industry associations
<p><i>Distribution channels</i> may include:</p>	<ul style="list-style-type: none"> • dealer, re-seller, franchisee • distributor, delivery service, mail order, telesales • self-access, wholesale, retail
<p><i>Levels of customer service</i> may include:</p>	<ul style="list-style-type: none"> • after sales service • one-on-one personal service • sales assistance for problems/queries only
<p><i>Marketing mix</i> may include:</p>	<ul style="list-style-type: none"> • distribution • level of service • pricing

RANGE STATEMENT	
	<ul style="list-style-type: none"> • promotion • quality, range • safety features • technical features, design
<i>Promotional activities</i> may include:	<ul style="list-style-type: none"> • advertising in national, suburban or local newspapers • advertising on radio or television • canvassing • development of networks and strategic alliances • display posters • exhibitions, in-store promotions • involvement in community projects • mail drops • professional/industry journals • sponsorship • staff development programs to enhance customer service orientation • website • word of mouth, referral, testimonials
<i>Performance gaps</i> may include:	<ul style="list-style-type: none"> • over achievement of performance targets • under achievement of performance targets
<i>Customer reaction</i> may be determined through:	<ul style="list-style-type: none"> • customer meetings, focus groups • identification of new business opportunities • informal discussion • sales to contact ratio • survey/other feedback mechanisms • trend analysis

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Small and Micro Business
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Co-requisite units

Co-requisite units		

BSBSMB404A Undertake small business planning

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to research and develop an integrated business plan for achieving business goals and objectives.</p> <p>Specific legal requirements apply to the management of a small business.</p>
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Application of the Unit

Application of the unit	<p>This work is undertaken by individuals who operate a small business.</p> <p>This unit is suitable for micro and small businesses or a department in a larger organisation.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify elements of the business plan	1.1. Identify purpose of the <i>business plan</i> 1.2. Identify and review the essential components of the business plan 1.3. Identify and document <i>business goals and objectives</i> as a basis for measuring business performance
2. Develop a business plan	2.1. Research resources, legal and compliance requirements, specifically in relation to <i>occupational health and safety (OHS)</i> , in accordance with business goals and objectives 2.2. Research market needs, and market size and potential 2.3. Identify sources and costs of finance, from the <i>financial plan</i> , to provide required liquidity and profitability for the business 2.4. Identify methods, from the <i>marketing strategies</i> , to promote the market exposure of the business 2.5. Identify methods/means of production/operation from the <i>production/operations plan</i> to conform with business goals and objectives 2.6. Identify <i>staffing requirements</i> to effectively produce/deliver products/services 2.7. Identify <i>specialist services</i> and sources of advice, where required, and cost in accordance with resources available
3. Develop strategies for minimising risks	3.1. Identify specific interests and objectives of <i>relevant people</i> and seek and confirm their support of the planned business direction 3.2. Identify and develop <i>risk management strategies</i> according to business goals and objectives, and relevant legal requirements 3.3. Develop <i>contingency plan</i> to address possible areas of non-conformance with the plan

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to assess business performance
- literacy skills to enable interpretation of business information
- numeracy skills to analyse data.

Required knowledge

- commonwealth, state/territory and local government legislative requirements relating to business operation, especially in regard to OHS and environmental issues, equal employment opportunity, industrial relations and anti-discrimination
- methods of evaluation
- OHS responsibilities and procedures for identifying hazards relevant to the business
- planning processes
- preparation of a business plan
- principles of risk management relevant to business planning
- reasons for and benefits of, business planning
- relevant industry codes of practice
- setting goals and objectives
- types of business planning - feasibility studies; strategic, operational, financial and marketing planning.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • development of a business plan which provides for finance, marketing and provision of products/services to facilitate the business goals and objectives • identification of and planning for, OHS and duty of care responsibilities • development of risk management strategies • knowledge of relevant legislation.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to relevant documentation • candidate's individual circumstances and work in the context of running a small business, are the basis for assessment.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • portfolio of evidence including a business plan and risk management strategies • oral or written questioning to assess knowledge of OHS responsibilities and procedures for identifying hazards relevant to the business • demonstration of practical skills • review of documented business goals and objectives • review of contingency plans developed to address possible areas of non-conformance with the business plan.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBSMB401A Establish legal and risk management requirements of small business • BSBSMB402A Plan small business finances • BSBSMB403A Market the small business.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Business plan</i> may include:</p>	<ul style="list-style-type: none"> • business opportunities, which may be influenced by: <ul style="list-style-type: none"> • amount and types of finance available • expected financial viability • skills of operator • details of ownership/management • finance, expenditure statement, balance sheet and cash flow forecast, projections for the initial years of operation assumptions underlying the business plan, expected level of inflation and taxation, expected trend of interest rate, capital expenditure and its timing, stock turnover, debtors collection period, creditor payment period, return on investment • level of risk involved, risk assessment and management • market focus of the business • marketing requirements • need to raise finance and requirements of lenders • organisation/operational arrangements • proposed size and scale of the business • recognition of any seasonal or cyclical (time-based) elements which are crucial to the success of the business • resources required and available • sources of funding • specialist services and sources of advice that may be required • staffing • stages in the business development
<p><i>Business goals and objectives</i> may include:</p>	<ul style="list-style-type: none"> • customer needs/marketing projections • family or community benefits

RANGE STATEMENT	
	<ul style="list-style-type: none"> • financial projections • goals, objectives, plans, systems and processes • lifestyle issues • market focus of the business • proposed size and scale of the business • short-, medium- or long-term goals • social responsibility
<i>Occupational health and safety issues</i> must include:	<ul style="list-style-type: none"> • identification of specific hazard issues such as occupational violence, security, manual handling, equipment and hazardous substances • management of the organisation and operation of OHS as part of the business plan • procedures for managing hazards in the workplace (identify, assess and control) • provisions for ensuring safety of members of the public and contractors visiting the premises/worksite
<i>Financial plan</i> may include:	<ul style="list-style-type: none"> • analysis of sales by product/service, identifying where they were sold and to whom • cash flow estimates for each forward period • current financial state of the enterprise (or owner/operator) • estimates of profit and loss projections for each forward period • financial performance to date (if applicable) • likely return on investment • monthly, quarterly or annual returns • non-recurrent assets calculations • profit, turnover, capital and equity targets • projected profit targets, pricing strategies, margins • projections of likely financial results (budgeting) • projections, which may vary depending on the importance of such information and the stage in the life of the business • resources required to implement the proposed marketing and production strategies (staff, materials, plant and equipment) • review of financial inputs required (sources

RANGE STATEMENT	
	<p>and forms of finance)</p> <ul style="list-style-type: none"> • risks and measures to manage or minimise risks • working, fixed, debt and equity capital
<i>Marketing strategies</i> may include:	<ul style="list-style-type: none"> • achieving lower costs of production and distribution than competitors • creating a very different product line or service so that the business becomes a class leader in the industry • distribution • pricing, presentation and display of products/services • product design and packaging • product range and mix • promotion and advertising • pursuing cost leadership and/or product differentiation within a specialist market segment
<i>Production/operations plan</i> may include:	<ul style="list-style-type: none"> • customer requirements, market expectations, budgetary constraints • industrial relations climate and quality assurance considerations • means of supply and distribution • operational targets and action plan, which may include short-, medium- or long-term goals • options for production, delivery, technical and customer service and support
<i>Staffing requirements</i> may include:	<ul style="list-style-type: none"> • full-time, part-time staff, permanent, temporary or casual staff • owner/operator • sub-contractors or external advisers/consultants
<i>Specialist services</i> may include:	<ul style="list-style-type: none"> • accountants • business advisors and consultants • business brokers • contractors • government agencies • industry/trade associations • lawyers and providers of legal advice • mentors

RANGE STATEMENT	
	<ul style="list-style-type: none"> • online gateways
<i>Relevant people</i> may include:	<ul style="list-style-type: none"> • clients • family members • franchise agency • owner/operator, partners, financial backers • regulatory bodies • suppliers • trade or industry associations
<i>Risk management strategies</i> may include:	<ul style="list-style-type: none"> • breach of contract, product liability • knowledge management • measures to manage risk including professional indemnity, securing appropriate insurance to cover loss of earnings through sickness/accidents, drought, flood, fire, theft • security systems to provide physical security of premises, plant, equipment, goods and services • security of intellectual property
<i>Risk management strategies</i> must include:	<ul style="list-style-type: none"> • OHS requirements
<i>Contingency plan</i> may include:	<ul style="list-style-type: none"> • disturbances to cash flow, supply and/or distribution • sickness or personal considerations

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Small and Micro Business
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Co-requisite units

Co-requisite units		

BSBSMB405A Monitor and manage small business operations

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to operate a small business and to implement a business plan. The strategies involve monitoring, managing and reviewing operational procedures.</p> <p>Specific legal requirements apply to the management of a small business.</p>
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Application of the Unit

Application of the unit	<p>This work is undertaken by individuals who operate a small business.</p> <p>The unit is suitable for existing micro and small businesses or a department in a larger organisation.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop OPERATIONAL STRATEGIES AND PROCEDURES	1.1. Develop an action plan to provide a clear and coherent direction, in accordance with the <i>business goals and objectives</i> 1.2. Identify <i>occupational health and safety (OHS) and environmental issues</i> and implement strategies to minimise risk factors 1.3. Develop a <i>quality system</i> for the business in line with industry standards, compliance requirements and cultural criteria 1.4. Develop performance measures and <i>operational targets</i> to conform with the business plan 1.5. Develop strategies for innovation, including the utilisation of existing, new or emerging technologies, where practicable, to optimise business performance
2. Implement operational strategies and procedures	2.1. Implement systems and key performance indicators/targets to monitor business performance and customer satisfaction 2.2. Implement systems to control stock, expenditure/cost, wastage/shrinkage and risks to health and safety in accordance with the business plan 2.3. Maintain staffing requirements, where applicable, within budget to maximise productivity 2.4. Carry out the provision of goods/services in accordance with established legal, ethical cultural and <i>technical standards</i> 2.5. Provide goods/services in accordance with time, cost and quality specifications, and customer requirements 2.6. Apply quality procedures to address product/service and customer requirements
3. Monitor business performance	3.1. Regularly monitor/review the achievement of operational targets to ensure optimum business performance, in accordance with the business plan goals and objectives 3.2. Review systems and structures, with a view to more effectively supporting business performance 3.3. Investigate and analyse operating problems to establish causes and implement changes as required as part of the business quality system

ELEMENT	PERFORMANCE CRITERIA
	3.4. Amend operational policies and procedures to incorporate corrective action
4. Review business operations	4.1. Review and adjust business plan, as required, to maintain business viability, in accordance with business goals and objectives 4.2. Clearly record proposed changes to aid future planning and evaluation 4.3. Undertake ongoing research into new business opportunities and adjust business goals and objectives as new business opportunities arise

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to develop criteria and targets for the business plan
- communication skills to question, clarify and report
- literacy skills to interpret legal requirements, company policies and procedures
- numeracy skills to manage performance information and to control the finances
- technology skills to use relevant business equipment.

Required knowledge

- methods for developing and maintaining networks
- methods for implementing operation and revenue control systems
- methods for monitoring performance and implementing improvements
- OHS responsibilities and procedures for managing hazards
- principles of risk management relevant to the business, including risk assessment
- quality system principles and methods
- relevant industry codes of practice
- relevant marketing, sales and financial concepts
- relevant performance measures
- role of innovation
- systems to manage staff, stock, expenditure, services and customer service
- technical or specialist skills relevant to the business operation.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • developing strategies and procedures to successfully manage the operation of the business • making appropriate adjustments to the business operations as required • knowledge of quality system principles and methods.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to relevant documentation • candidate's individual circumstances and work in the context of running a small business, are the basis for assessment.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • portfolio of evidence including operational strategies and procedures • oral or written questioning to assess knowledge of principles of risk management relevant to the business, including risk assessment • review of analysis of operating problems (establishing causes and implementing changes as required as part of the business quality system) • review of records proposing changes to the business operations.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBSMB406A Manage small business finances • BSBSMB407A Manage a small team.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Operational strategies and procedures</i> may be determined by:</p>	<ul style="list-style-type: none"> • business premises (size, location, layout) • financial control systems and procedures • management and administrative systems and procedures • methods/techniques/technology • physical and natural resources • plant and equipment , including OHS requirements • premises, plant and equipment, which may be new or previously owned • purchase (sole or shared ownership) or leasing • raw materials • requirements, which may be one-off requirements or recurrent requirements (such as equipment maintenance) specific to the nature of the business • technology • use of existing, new and emerging technologies including e-commerce
<p><i>Business goals and objectives</i> may include:</p>	<ul style="list-style-type: none"> • customer needs/marketing projections • family or community benefits • financial projections • goals, objectives, plans, systems and processes • lifestyle issues • proposed size and scale of the business, market focus of the business • short-, medium- or long-term goals • social responsibility
<p><i>Occupational health and safety and environmental issues</i> must include:</p>	<ul style="list-style-type: none"> • controls, which may include instructions to workplace personnel concerning site hazards and controls, material safety data sheets, use of personal protective equipment, vehicle access, signs and barricades, traffic control, outside contractors

RANGE STATEMENT	
	<ul style="list-style-type: none"> establishment and maintenance of procedures for assessing and controlling risks establishment and maintenance of procedures for identifying risks to health and safety waste and by-products
<i>Quality system</i> may include:	<ul style="list-style-type: none"> manual or computer quality control systems quality assurance/management approaches random inspections and assessments of goods and services against predetermined standards random inspections and assessments of processes against predetermined standards random sampling and follow-up of customers
<i>Operational targets</i> may include:	<ul style="list-style-type: none"> external targets, which may relate to market share and positioning and may involve exploring new markets, building national or international trade links internal targets, which may relate to size, quality, quantity and diversity, wages to sales, sales to area/stock levels/stock turnover/average debtor payment periods and levels staffing level and skills mix targets, which may be short-, medium- or long-term
<i>Technical standards</i> may include:	<ul style="list-style-type: none"> current and generally agreed descriptions of what the product/service is, how it should be produced/delivered and the quality, safety, efficiency or other measures to determine the activity is done effectively

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Small and Micro Business
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Co-requisite units

Co-requisite units		

BSBSMB406A Manage small business finances

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to implement, monitor and review strategies for the ongoing management of a small business's finances. It also includes day to day financial management of the small business.</p> <p>Specific legal requirements apply to the management of a small business.</p>
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Application of the Unit

Application of the unit	<p>This work is undertaken by individuals who operate a small business.</p> <p>The unit is suitable for existing micro and small businesses or a department in a larger organisation.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Implement financial plan	<p>1.1. Identify financial information requirements and obtain specialist services, as required, to profitably operate and extend the business in accordance with the business plan</p> <p>1.2. Produce financial budgets/projections, including cash flow estimates, as required for each forward period, and distribute to relevant people in accordance with legal requirements</p> <p>1.3. Negotiate, secure and manage business capital to best enable implementation of the business plan and to meet the requirements of financial backers</p> <p>1.4. Develop and maintain strategies to enable adequate financial provision for taxation in accordance with legal requirements</p> <p>1.5. Develop, monitor and maintain client credit policies, including contingencies for debtors in default, to maximise cash flow</p> <p>1.6. Select key performance indicators to enable ongoing monitoring of financial performance</p> <p>1.7. Record and communicate financial procedures to relevant people to facilitate implementation of the business plan</p>
2. Monitor financial performance	<p>2.1. Regularly monitor and report on financial performance targets and analyse data to establish the extent to which the financial plan has been met</p> <p>2.2. Monitor marketing and operational strategies for their effects on the financial plan</p> <p>2.3. Calculate and evaluate financial ratios according to own/industry benchmarks</p> <p>2.4. Assess financial plan to determine whether variations or alternative plans are needed, and change as required</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to interpret financial data
- communication skills to negotiate capital and to report on performance
- literacy skills to interpret legal requirements and financial reports
- numeracy skills to calculate costs, prices, profit and other financial information.

Required knowledge

The following knowledge must be assessed as part of this unit:

- benchmarking
- financial decision making relevant to the business
- financial indicators
- purpose of financial reports
- preparation and interpretation of budget/actual reports
- principles for preparation of balance sheets and their interpretation
- principles for preparation of profit and loss statements and their interpretation
- stock records/stock control relevant to the business.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • development, implementation and review of strategies for the ongoing management of finance • maintenance of day-to-day financial management of the business as well as implementation of broad financial strategies • knowledge of purpose of financial reports.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to relevant documentation • candidate's individual circumstances and work in the context of establishing or running a small business, are the basis for assessment.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • portfolio of evidence including financial reports • preparation and review of financial ratios • review of cash flow projections • analysis of development, monitoring and maintenance of client credit policies • oral or written questioning to assess knowledge of principles for preparation of balance sheets and their interpretation.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBSMB402A Plan small business finances • BSBSMB405A Monitor and manage small business operations.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Financial plan may include:

- analysis of sales by product/service, identifying where they were sold and to whom
- cash flow estimates for each forward period
- current financial state of the enterprise (or owner/operator)
- estimates of profit and loss projections for each forward period
- financial performance to date (if applicable)
- likely return on investment
- monthly, quarterly or annual returns
- non-recurrent assets calculations
- profit, turnover, capital and equity targets
- projected profit targets, pricing strategies, margins
- projections of likely financial results (budgeting)
- projections, which may vary depending on the importance of such information and the stage in the life of the business
- resources required to implement the proposed marketing and production strategies (staff, materials, plant and equipment)
- review of financial inputs required (sources and forms of finance)
- risks and measures to manage or minimise risks
- working, fixed, debt and equity capital
- working in conjunction with external consultants e.g. investment analysts, accountants, financiers

Financial information may include:

- accrual of staff leave/entitlements
- asset management strategies which may include:
 - owning, leasing, sharing, syndicating
 - maintaining and deploying assets
- asset registers
- balance sheets
- bookkeeping/accounting/stock/job costing records

RANGE STATEMENT	
	<ul style="list-style-type: none"> • business activity statements • business capital • cash book • cash flow forecasts • financial budgets • financial indicators, which may be short-, medium- and/or long-term • payroll records, superannuation entitlements • profit and loss statements • ratios for profitability, liquidity/efficiency/financial structure • risk management • statements/forecasts • taxation returns including goods and services tax
<i>Specialist services</i> may include:	<ul style="list-style-type: none"> • accountants • business brokers/business consultants • government agencies • industry/trade associations • lawyers and providers of legal advice • mentors • online gateways • providers of training in accounting software
<i>Cash flow</i> may include:	<ul style="list-style-type: none"> • anticipated payments • anticipated receipts • customer credit policy/debt recovery • taxation provisions
<i>Relevant people</i> may include:	<ul style="list-style-type: none"> • family members • financial backers • franchise agency • owner/operator • partners • regulatory bodies • trade or industry associations
<i>Financial backers</i> may include:	<ul style="list-style-type: none"> • financiers/banks/lending institutions • leasing and hire purchase financiers • providers of venture capital • shareholders/partners/owners/family/friends
<i>Credit policies</i> may include:	<ul style="list-style-type: none"> • collateral • credit limits • credit references

RANGE STATEMENT	
	<ul style="list-style-type: none"> • debt collection • payment options • proof of Indigenous identity • trading terms
<i>Financial ratios</i> may include:	<ul style="list-style-type: none"> • current ratio • days debtors outstanding • days stock on hand • expense percentages • gross profit percentage • liquid ratio • net profit percentage • proprietary/debt ratio • return on investment/return on total assets • staff productivity measures • stock turn rates

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Small and Micro Business
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Co-requisite units

Co-requisite units	

BSBSMB407A Manage a small team

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to plan for the management of and to manage staff. It involves industrial relations, staff selection, staff records, induction, training, team development and career planning to enhance business operations through retaining a competent, committed and motivated team in the workplace.</p> <p>Specific legal requirements apply to the management of a small business.</p>
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Application of the Unit

Application of the unit	<p>This work is undertaken by individuals who operate a small business.</p> <p>The unit is suitable for existing micro and small businesses or a department in a larger organisation.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop staffing plan	1.1. Determine <i>staffing requirements</i> to allow the business to run effectively, in accordance with the business requirements as outlined in the business plan 1.2. Identify and compare the existing skills/competencies of owner/s and staff with business requirements to identify any gaps 1.3. Develop <i>policies and procedures</i> for owner/s and staff, in accordance with the business plan
2. Recruit, induct, train and retain the team	2.1. Develop job/position descriptions, competencies required and selection criteria to meet the needs of the business 2.2. Judge information obtained from each candidate against specified selection criteria and decide selection in accordance with business needs and legal requirements 2.3. Induct new staff members in accordance with the policies and procedures of the business 2.4. Make team members aware of their responsibilities and performance requirements as soon as practicable and take opportunities to coach team members who are unfamiliar with the procedures of the business 2.5. Develop and implement a <i>staff development program and career paths</i> based on the requirements of business and staff competencies 2.6. <i>Advertise staff vacancies</i> appropriately in accordance with staffing plan
3. Comply with INDUSTRIAL RELATIONS obligations	3.1. Clarify workplace rights and obligations of employers and employees, in accordance with <i>legal requirements and codes of practice</i> 3.2. Counsel staff, if required, in a positive and constructive manner and record outcomes accurately
4. Maintain staff records	4.1. Develop <i>staff records system</i> to provide timely and accurate information, in accordance with confidentiality, legal and taxation requirements 4.2. Monitor and accurately maintain the system for recording and retrieving personnel and payroll information and seek specialist advice where required
5. Manage staff	5.1. Regularly review contribution and skills of self and

ELEMENT	PERFORMANCE CRITERIA
	<p>other team members to ensure performance is in line with agreed <i>performance measures</i></p> <p>5.2. Monitor and adjust staffing requirements to respond to any changes in tasks and functions required by the business</p> <p>5.3. Support and encourage staff, and acknowledge and reward their contribution to the business</p> <p>5.4. Regularly provide opportunities for staff to discuss work related issues</p> <p>5.5. Develop <i>contingency plans</i> to cope with unexpected or extreme situations and take appropriate corrective action as required</p>
6. Review team performance	<p>6.1. Develop positive and constructive relationships with and between <i>team members</i></p> <p>6.2. Review and update team objectives in support of business goals on a regular basis in consultation with team members</p> <p>6.3. Identify strengths and weaknesses of team against current and expected work requirements</p> <p>6.4. Schedule time, on a regular basis, for team members to review work operations in order to maintain and improve operational efficiency</p> <p>6.5. Encourage team members to monitor their own performance, suggest improvements and to identify professional development needs, in accordance with personal and business requirements</p> <p>6.6. Monitor and review staff turnover rate</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analytical skills to identify workplace skill gaps
- coaching skills
- communication skills to relate to staff
- conflict resolution skills
- literacy skills to interpret legal requirements, to compile reports and to prepare a job/position description
- team building and motivation skills.

Required knowledge

- commonwealth, state/territory and local government legislative requirements relating to business operation, especially in regard to occupational health and safety (OHS) and environmental issues, equal employment opportunity (EEO), industrial relations and anti-discrimination
- OHS responsibilities and procedures for managing hazards
- relevant industry awards/enterprise agreements
- staff development and career planning
- staff counselling, grievance and disciplinary procedures
- unfair dismissal legislation and procedures.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> managing a small team including staff selection, staff records, induction, training and development developing and maintaining team performance to enhance business operations knowledge of relevant legislative requirements affecting business operation.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> access to relevant documentation candidate's individual circumstances and work in the context of running a small business, are the basis for assessment.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> portfolio of evidence including staff policies and records, and contingency plans oral or written questioning to assess knowledge of staff recruitment procedures, staff development and review programs review of job/position descriptions and selection criteria developed review of documentation monitoring and reviewing staff turnover rate.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> BSBSMB405A Monitor and manage small business operations.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Staffing requirements</i> may include:</p>	<ul style="list-style-type: none"> • full-time, part-time, permanent, temporary or casual • number of staff • responsibilities, competencies required • self, other owners, family and/or friends • sub-contractors or external advisors/consultants • time commitment, performance expectations
<p><i>Policies and procedures</i> must include:</p>	<ul style="list-style-type: none"> • complaint and grievance procedures • culturally appropriate entitlements e.g. funeral leave, national/religious days • culturally appropriate procedures e.g. how business will enact cultural requirements for relationships between owner/operator, employees and service providers • employment conditions, equal opportunity, anti-discrimination, cultural diversity • induction and training • OHS • recruitment and selection • performance measures • professional development
<p><i>Staff development program and career paths</i> may include</p>	<ul style="list-style-type: none"> • attendance at courses • career planning • coaching • flexible learning • job rotation • mentoring • on-the-job training • professional development • staff exchanges • succession planning
<p><i>Advertising staff vacancies</i> may</p>	<ul style="list-style-type: none"> • electronic (radio, television and internet)

RANGE STATEMENT	
include:	<ul style="list-style-type: none"> • noticeboards • print media • word-of-mouth
<i>Industrial relations</i> may include:	<ul style="list-style-type: none"> • awards and/or industrial agreements and relevant industrial instruments • counselling, dismissal procedures
<i>Legal requirements and codes of practice</i> may include:	<ul style="list-style-type: none"> • award and enterprise agreements and relevant industrial instruments • commonwealth, state/territory and local government legislative requirements affecting business operation, especially in regard to OHS and environmental issues, EEO, industrial relations and anti-discrimination • relevant industry codes of practice
<i>Staff records system</i> must include:	<ul style="list-style-type: none"> • disciplinary and grievance procedures • employee records (including tax file number, remuneration, leave and training records) • job/position descriptions • OHS record • records of taxation and superannuation payments made
<i>Performance measures</i> may include:	<ul style="list-style-type: none"> • overall staff productivity • percentage of chargeable hours/days per week • performance of key people • ratio of direct workers to those who support, supervise or manage them • ratio of sales dollars per employee • staff morale, work ethic, work satisfaction
<i>Contingency plans</i> may include:	<ul style="list-style-type: none"> • accidents or emergencies • environmental issues • fluctuating workloads • OHS • unpredicted customer demand/busy periods • unpredicted staff shortages
<i>Team members</i> may include:	<ul style="list-style-type: none"> • employees, trainees/apprentices, sub-contractors or external advisers/consultants • owner/s, partners, family members

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Management and Leadership - Small and Micro Business
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Co-requisite units

Co-requisite units		

BSBWOR204A Use business technology

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to select, use and maintain a range of business technology. This technology includes the effective use of computer software to organise information and data.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to individuals who use business technology to perform a range of routine tasks. They use a limited range of practical skills and fundamental knowledge of equipment use and the organisation of data or files in a defined context, under direct supervision or with limited individual responsibility.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select and use technology	1.1. Select appropriate <i>technology</i> and <i>software applications</i> to achieve the requirements of the task 1.2. Adjust workspace, furniture and equipment to suit user ergonomic requirements 1.3. Use technology according to <i>organisational requirements</i> and in a way which promotes a safe work environment
2. Process and organise data	2.1. Identify, open, generate or amend files and records according to task and organisational requirements 2.2. Operate <i>input devices</i> according to organisational requirements 2.3. <i>Store data</i> appropriately and exit applications without damage to or loss of, data 2.4. Use manuals, training booklets and/or online help or help-desks to overcome basic difficulties with applications
3. Maintain technology	3.1. Identify and replace used <i>technology consumables</i> in accordance with manufacturer's instructions and organisational requirements 3.2. Carry out and/or arrange <i>routine maintenance</i> to ensure equipment is maintained in accordance with manufacturer's instructions and organisational requirements 3.3. <i>Identify equipment faults</i> accurately and take action in accordance with manufacturer's instructions or report fault to designated person

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- literacy skills to identify work requirements; to understand and process basic, relevant workplace information; and to follow written instructions
- communication skills to request advice, to receive feedback and to work with a team
- problem-solving skills to solve routine technology problems.

Required knowledge

- key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as:
 - anti-discrimination legislation
- ethical principles
 - codes of practice
 - privacy laws
 - occupational health and safety (OHS)
- organisational policies, plans and procedures, especially in regard to file-naming and storage conventions
- organisational IT procedures including back-up and virus protection procedures
- basic technical terminology in relation to reading help-files and manuals.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • selection and application of appropriate equipment and software applications in relation to assigned task/s • access, retrieval and storage of required data • performance of basic maintenance on a range of office equipment
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to an actual workplace or simulated environment • access to office equipment and resources • examples of files and data for storage • manuals and training booklets for equipment.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • analysis of responses to case studies and scenarios • demonstration of techniques • oral or written questioning to assess knowledge of office equipment • evaluation of maintaining technology.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • IT use units • other industry capability units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Technology</i> may include:</p>	<ul style="list-style-type: none"> • computer technology, such as laptops and personal computers • digital cameras • modems • printers • scanners • zip drives • photocopiers • shredders • binders • laminators • cutters
<p><i>Software applications</i> may include:</p>	<ul style="list-style-type: none"> • email, internet • word processing, spreadsheet, database, accounting or presentation packages
<p><i>Organisational requirements</i> may include:</p>	<ul style="list-style-type: none"> • correctly identifying and opening files • legal and organisation policies, guidelines and requirements • locating data • log-on procedures • manufacturer's guidelines • OHS policies, procedures and programs • saving and closing files • storing data
<p><i>Input devices</i> may include:</p>	<ul style="list-style-type: none"> • keyboard • mouse • numerical key pad • scanner
<p><i>Storage of data</i> may include:</p>	<ul style="list-style-type: none"> • appropriate storage/filing of hard copies of computer generated documents • storage in directories and sub-directories • storage on CD-ROMs, hard and floppy disk drives or back-up systems

RANGE STATEMENT	
<i>Technology consumables</i> may include:	<ul style="list-style-type: none"> • back-up tapes • CD-ROM • floppy disks • print heads • printer ribbons and cartridges • toner cartridges • zip disks
<i>Routine maintenance</i> may include:	<ul style="list-style-type: none"> • in-house cleaning and servicing of equipment according to manufacturer's guidelines • periodic servicing by qualified or manufacturer approved, technician • regular checking of equipment • replacing consumables
<i>Identifying equipment faults</i> may include:	<ul style="list-style-type: none"> • checking repairs have been carried out • encouraging feedback from work colleagues • keeping a log book of detected faults • preparing a maintenance program • regular back-ups of data • regular OHS inspections • routine checking of equipment

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Industry Capability - Workplace Effectiveness
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Co-requisite units

Co-requisite units	

Co-requisite units		

CPCBC4037A Prepare drawings for heritage works

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to prepare drawings for heritage works associated with historic buildings and structures of cultural significance. To successfully prepare drawings requires a comprehensive understanding of architectural forms, specifically period architecture, and appropriate drafting techniques. The unit requires the ability to interpret specifications for drawings, measure and calculate dimensions accurately, and work to scale.

Application of the Unit

Application of the unit This unit of competency supports builders, project managers and related construction industry professionals responsible for heritage works during residential and commercial projects.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for drawing requirements.	<p>1.1. Specifications for drawing are identified from request or conservation authority requirements.</p> <p>1.2. Dimensions of the <i>historical or significant building</i> are determined in accordance with appropriate <i>methods</i>, taking into account the type of structure, access to details and previous drawings available, if applicable.</p> <p>1.3. Method of recording feature details is determined in accordance with nature of the feature, location and accessibility.</p> <p>1.4. Method and system of recording identification, location and dimensional information are determined and applied in accordance with requested drawing requirements.</p> <p>1.5. Equipment and instruments required are identified, listed and used in accordance with recording task requirements.</p>
2. Organise information for drawing preparation.	<p>2.1. Information is gathered and organised to determine overall dimensions of the building, structure or details to be drafted.</p> <p>2.2. Information is gathered to identify and group all recorded details associated with each area or section of the building or structure.</p> <p>2.3. Size of the drawing and scale to be used is determined in accordance with dimensions of building, structure or section.</p> <p>2.4. Sketches, tracings or photographs of recorded features are identified and located with other recorded information related to <i>feature work</i>.</p>
3. Draw or develop orthographic description.	<p>3.1. Block layout of views and designed spacings, where applicable, are drawn or developed to planned layout and scaled accurately to recorded or calculated dimensions.</p> <p>3.2. <i>Orthographic description</i> views are detailed to show visible lines of structure and elements as seen with each view to correct scale representation of recorded dimensions.</p> <p>3.3. Architectural drawing conventions, symbols and hatching, where applicable, are shown on drawings in accordance with AS1100.301 - 1985 Architectural Drafting.</p>

ELEMENT**PERFORMANCE CRITERIA**

ELEMENT	PERFORMANCE CRITERIA
	<p>3.4. Plans of large buildings are produced by use of grids, where applicable, to provide cross-referencing and dimensioning by coordinates.</p> <p>3.5. Dimensions and reference notations are located relevantly on drawings to provide full detailed descriptions as required with each view.</p> <p>3.6. Appendices and reference details of drawing are provided with drawing as required and in accordance with overall request.</p>
4. Draw or develop sectional detailed drawings.	<p>4.1. <i>Sectional detailed drawings</i> are drawn or <i>developed</i> to scale to show detailed structural description of relationship between elements in accordance with recorded dimensions.</p> <p>4.2. Architectural hatching is shown on drawings to represent materials, in accordance with relevant Australian standards.</p> <p>4.3. Dimensions and reference notation are located on drawings to provide full details of sectional description.</p>
5. Develop detailed drawings of feature work.	<p>5.1. Photographic recording of feature work shape and design is enlarged by photocopying to provide more realistic size for analysis and reproduction.</p> <p>5.2. Gridlines are determined in accordance with actual dimensions of the feature work shape and are reproduced to enlarged photocopy.</p> <p>5.3. Enlarged photocopy is closely examined for distortion from the photographing process and adjustments are made to the design, as necessary.</p> <p>5.4. Tracing recordings are examined in accordance with the whole feature or part thereof and linked with other tracings or sketches to ascertain the feature shape to be reproduced.</p> <p>5.5. Design shape drawings are developed to produce accurate design to scale with grid lines where applicable.</p> <p>5.6. Cross-sectional details are produced accurately to scale, to provide three-dimensional information.</p> <p>5.7. Dimensions, reference notation, specific location and appendices are produced for drawings in accordance with client request or design aims.</p>
6. Complete work.	<p>6.1. Drawings are checked for accuracy, clarity of line, completeness of drawing and associated dimensions and details.</p>

ELEMENT**PERFORMANCE CRITERIA**

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- 6.2. Copies are made, where applicable, in accordance with original request.
 - 6.3. Production details and coded reference information are recorded.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- ability to use instruments and equipment for measuring
- communication skills to:
 - enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
 - read and interpret:
 - documentation from a variety of sources
 - plans, specifications and drawings
 - use and interpret non-verbal communication
 - use language and concepts appropriate to cultural differences
 - written skills to record relevant information
- numeracy skills to calculate measurements
- organisational skills, including the ability to set out work
- work to scale.

Required knowledge

Required knowledge for this unit is:

- Australian standards - AS1100.101 and AS1100.301
- conservation processes, including good conservation practice arising from principles of Burra Charter
- finishing trade applications to materials
- methods and processes relating to historic building construction, including the range and use of building materials, structure of buildings and drafting techniques
- methods of measuring
- relevant architectural knowledge, including orders of architecture and the characteristics and features of period architecture

REQUIRED SKILLS AND KNOWLEDGE

- workplace and equipment safety requirements, including relevant statutory regulations, codes and standards.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed by carrying out the necessary preparatory processes and developing at least two examples of each form of drawing specified, using sample or case study heritage projects for any of the buildings listed in the range statement.

This unit of competency can be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- clearly understand conservation considerations and consultative processes associated with preservation of historic structures
- clearly appreciate preservation of fabric
- comply with OHS regulations applicable to workplace operations
- apply organisational quality procedures and processes within the context of preparing drawings to conservation requirements
- apply recording and identification system for measurements, locations and details
- select and use appropriate processes, instruments and equipment to measure and record information
- use appropriate and safe techniques to obtain measurements and details
- apply accurate techniques in preparing information for related drawings
- select and use appropriate techniques to ascertain accurate analysis of featured design shapes

EVIDENCE GUIDE

- apply techniques to ensure all relevant information is included in orthographic description
- select and use appropriate techniques to produce accurate, sharp and complete drawings.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- historic locations appropriate to competency range
- drafting and computer equipment
- equipment relevant to measuring processes.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over

EVIDENCE GUIDE

a period of time reflecting the scope of the role and the practical requirements of the workplace

- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Historical or significant building includes:

- built or sculptured artefacts
- cathedrals and churches
- civic buildings
- commercial and retail buildings
- doors

RANGE STATEMENT

- external features
 - fences
 - government buildings
 - houses
 - mansions
 - out buildings
 - walls
 - wharves
 - windows.
- Methods** include:
- accurately trace shapes or features
 - calculate height by use of levelling equipment and/or trigonometry
 - physically tape and measure all internal and external measurement
 - scale proportion of roof, chimney and spire heights from photograph where wall height is determined.
- Feature work** includes:
- decorative tiling
 - mosaic tiling
 - ornamental mouldings
 - ornamental plasterwork
 - ornamental stonework.
- Orthographic description** includes:
- front, rear and side elevations
 - plans
 - sectional elevations
 - sectional plans.
- Sectional detailed drawings** include:
- ceiling and roof framing construction
 - ceiling construction
 - chimney construction
 - cladding details
 - external wall construction
 - fence construction
 - footings and foundation
 - internal wall construction
 - roofing details
 - sub-floor construction.
- Development** of drawings includes:
- computer aided drafting
 - drafting techniques
 - drawings developed in accordance with National Trust guidelines or in accordance with AS1100.101 - 1992 Technical Drawing -

RANGE STATEMENT

General Principles, and AS1100.301 - 1985
Architectural Drawing.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CPCCCM3001A Operate elevated work platforms

Modification History

Not applicable.

Unit Descriptor

This unit of competency specifies the outcomes required to safely and effectively operate some types of elevated work platforms (EWPs) in a variety of different terrains and situations to access isolated work areas. The unit includes locating, setting up, operating and shutting down EWPs.

In addition to achievement of this competency, an EWP operator may need to obtain additional certification of training and experience before being allowed to operate the equipment.

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In addition to achievement of this competency, an EWP operator may need to obtain additional certification of training and experience before being allowed to operate the equipment.

Application of the Unit

This unit of competency assists in the safe and effective operation of electrical, hydraulic or mechanical EWPs. The unit does not cover powered telescoping devices, hinged devices or articulated devices, or any combination of these used to support a platform on which personnel, equipment and materials may be elevated to perform work and which has a boom length of 11 metres or more. An OHS authority Certificate of Competency may be required to operate boom type EWPs of 11 metres or more in some jurisdictions.

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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

CPCCOHS2001A	Apply OHS requirements, policies and procedures in the construction industry
CPCCCM1006A	Work safely at heights

Employability Skills Information

This unit contains employability skills.

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Plan and prepare.	<p>1.1 Work planning and preparation are conducted using plans, specifications, quality requirements and operational details, obtained, confirmed and applied from relevant information .</p> <p>1.2 Safety (OHS) requirements for the types of EWP to be operated are followed in accordance with safety plans and policies.</p>

- 1.3 Signage and barricade requirements are identified and implemented.
 - 1.4 Plant, **tools and equipment** and **personal protective equipment** are selected to carry out tasks are consistent with job requirements, checked for serviceability, and any faults are rectified or reported prior to commencement.
 - 1.5 Materials appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use.
 - 1.6 **Environmental requirements** are identified for the project in accordance with environmental plans and **statutory and regulatory authority** obligations, and are applied.
- 2 Conduct routine checks of platform.
 - 2.1 Power source is determined and connected to platform equipment according to manufacturer specifications.
 - 2.2 Routine pre-operational equipment checks are carried out in accordance with checklist from operator's manual or manufacturer specifications.
 - 2.3 Equipment is switched on in accordance with start up procedures and controls are checked for correct operation and ease of movement.
 - 2.4 **Emergency safety devices** are checked to comply with instructions from operator's manual and checked for manual operation.
 - 2.5 Work location is checked for level ground or floor surface to determine stabilising and safe working area requirements.
 - 3 Locate equipment in place for work application.
 - 3.1 Platform is positioned for work application and stabilisers are engaged to set equipment base level into place according to **safe operating procedures** .
 - 3.2 Tools, equipment and materials are placed into bucket or on platform according to job application requirements.

- 4 Elevate platform to work location.
 - 4.1 **Harness** is fitted securely and lanyard connected to attachment point.
 - 4.2 **EWP operation** and controls are operated to manufacturer recommendations and platform is elevated to work position.
 - 4.3 Power is switched off where specified and locking devices are engaged according to operator's manual.
 - 4.4 Work is carried out to job specification and safety (OHS) requirements of operator's manual.
- 5 Lower platform and shut down.
 - 5.1 Controls are operated to manufacturer recommendations and platform is lowered to down position.
 - 5.2 Shut down procedures are carried out to operator's manual and equipment is switched off.
- 6 Clean up.
 - 6.1 Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification.
 - 6.2 Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and standard work practices.
 - 6.3 Work completion procedures are applied and relevant personnel notified that work is finished.

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

communication skills to:

identifying and accurately reporting to appropriate personnel any faults in tools, equipment or materials

numeracy skills to apply measurements and make calculations

organisational skills, including the ability to plan and set out work

teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities

technological skills to:

determine requirements

enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand

follow instructions

read and interpret:

report faults

use language and concepts appropriate to cultural differences

use and interpret non-verbal communication, such as hand signals

written skills to complete inspection log and handover

documentation from a variety of sources

drawings and specifications

use a range of mobile technology, such as two-way radio and mobile phones

voice and hand signals to access and understand site-specific instructions.

Required knowledge

Required knowledge for this unit is:

designs, functions and operational limitations of EWP equipment

EWP equipment types and OHS authority certification of competency requirements

EWP techniques

fault finding and identification

general construction terminology
job safety analysis (JSA) and safe work method statements
material safety data sheets (MSDS)
materials storage and environmentally friendly waste management
plans, specifications and drawings
processes for the calculation of load mass requirements
quality requirements
relevant Acts, regulations and codes of practice
safe working at heights
signalling methods and communications
types, characteristics, uses and limitations of plant, tools and equipment
workplace and equipment safety requirements.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- locate, interpret and apply relevant information, standards and specifications

- comply with site safety plan and OHS legislation, regulations and codes of practice applicable to workplace operations

- comply with organisational policies and procedures, including quality requirements

- safely and effectively use tools, plant and equipment

- communicate and work effectively and safely with others

- complete set up and operation of a range of EWPs as listed in the range statement, including all functions.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement

realistic tasks or simulated tasks covering the mandatory task requirements

relevant specifications and work instructions

tools and equipment appropriate to applying safe work practices

support materials appropriate to activity

workplace instructions relating to safe work practices and addressing hazards and emergencies

material safety data sheets

research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Integrated Framework Training Package

include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application

reinforce the integration of employability skills with workplace tasks and job roles

confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace

where the assessment is part of a structured learning experience the evidence collected

must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability and applied knowledge

all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

- Work planning and preparation** include:
- assessment of conditions and hazards
 - consideration that EWPs must not be operated anywhere with overhead powerlines above, or within specified clearance distances set out in documentation such as Electrical Safety - Power line NO GO Zones, unless permission has been obtained from the power authority and a JSA has been developed
 - determination of work requirements
 - equipment defect identification
 - work site inspection.
- Information** includes:
- diagrams or sketches
 - instructions issued by authorised organisational or external personnel
 - manufacturer specifications and instructions where specified
 - MSDS
 - memos
 - regulatory and legislative requirements pertaining to EWPs
 - relevant Australian standards
 - safe work procedures related to operating EWPs, including the safe working load written on the EWP which must be checked to ensure it is not exceeded
 - signage
 - verbal or written and graphical instructions
 - work bulletins
 - work schedules, plans and specifications.

Safety (OHS) is to be in accordance with legislation, regulations, codes of practice, organisational safety policies and procedures, and project safety plan and may include:

procedures related to equipment operation, including emergency shutdown and stopping, extinguishing equipment fires, organisational first aid requirements and evacuation

handling of materials

hazard control

hazardous materials and substances

organisational first aid

personal protective clothing and equipment

use of firefighting equipment

use of tools and equipment

workplace environment and safety.

Types of EWP :

EWPs include scissor lifts, boom and knuckle boom lifts with a boom length under 11 metres

EWPs are classified as:

trailer mounted boom lift (TL)

self-propelled boom lift (BL)

vertical lift (VL)

scissor lift (SL)

truck-mounted boom lift (TM), which is not covered by this unit of competency.

Tools and equipment include:

EWPs, extension leads, logbooks, service manuals, operation manuals, safety harnesses and lanyards

special attachments, which may have to be installed if equipment is to be shifted with the EWP, as lifting loads via cables and ropes from an EWP is not permitted.

Personal protective equipment includes:

that prescribed under legislation, regulations, codes of practice and workplace policies and practices.

Environmental requirements include:

clean-up protection

noise and dust

sedimentation control

vibration

	waste management.
Statutory and regulatory authorities include:	federal, state and local authorities administering applicable Acts, regulations and codes of practice.
Emergency safety devices include:	bleed valves electronic override emergency descent devices ground controls hydraulic accumulators.
Safe operating procedures include:	conduct of operational risk assessment and treatments associated with: not using slab terrain EWPs on any surface other than concrete or level asphalt. earth leakage boxes lighting power cables, including overhead service trays, cables and conduits restricted access barriers surrounding structures traffic control trip hazards work site visitors and the public working at heights working in confined spaces working in proximity to others working with dangerous materials
Harnesses include:	energy or shock absorbers that must be used with all fall arrest lanyard, harness and inertia reel systems full body rescue harness lanyards and inertia reels, which should be attached to the harness installed so that the maximum distance a person equipped with a harness would free fall before the fall arrest system takes effect is 2 metres.

EWP operation includes:

boom up and down
operate attachments
operate outriggers
slew left and right
telescope in and out.

Unit Sector(s)

Construction
Construction

Functional Area

empty
empt

CPCCOHS1001A Work safely in the construction industry

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit of competency specifies the outcomes required to undertake Occupational Health and Safety (OHS) induction training within the construction industry.

It requires the ability to demonstrate personal awareness of OHS legislative requirements, and the basic principles of risk management and prevention of injury and illness in the construction industry.

Licensing requirements will apply to this unit of competency depending on the regulatory requirements of each jurisdiction.

Application of the Unit

Application of the unit

This unit of competency supports the attainment of the basic OHS knowledge required prior to undertaking designated work tasks within any of the sectors within the construction industry. The unit relates directly to the general induction training program specified by the *National Code of Practice for Induction for Construction Work* (ASCC 2007).

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify OHS legislative requirements.	1.1. Applicable <i>OHS legislative requirements</i> relevant to own work, role and responsibilities are identified and explained. 1.2. Duty of care requirements are identified. 1.3. Own responsibilities to comply with <i>safe work practices</i> are identified and explained.
2. Identify construction hazards and control measures.	2.1. Basic principles of risk management are identified. 2.2. <i>Common construction hazards</i> are identified and discussed. 2.3. <i>Measures for controlling</i> hazards and risks are identified.
3. Identify OHS communication and reporting processes.	3.1. OHS communication processes, information and documentation are identified and discussed. 3.2. Role of <i>designated OHS personnel</i> is identified and explained. 3.3. <i>Safety signs and symbols</i> are identified and explained. 3.4. Procedures and <i>relevant authorities</i> for reporting hazards, <i>incidents</i> and injuries are identified.
4. Identify OHS incident response procedures.	4.1. <i>General procedures</i> for responding to incidents and <i>emergencies</i> are identified and explained. 4.2. Procedures for accessing first aid are identified. 4.3. Requirements for the selection and use of relevant <i>personal protective equipment</i> are identified and demonstrated. 4.4. <i>Fire safety equipment</i> is identified and discussed.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- communication skills to:
 - clarify OHS legislative requirements

REQUIRED SKILLS AND KNOWLEDGE

- verbally report construction hazards and risks
- ask effective questions
- relay information to others
- discuss OHS issues and information
- comprehension skills to:
 - explain the basic OHS legislative requirements which will be applicable to own work
 - explain the meaning of safety signs and symbols
 - identify common construction hazards
 - discuss the basic principles of risk management.

Required knowledge

Required knowledge for this unit is:

- applicable Commonwealth, State or Territory OHS legislation, regulations, standards, codes of practice and industry standards/guidance notes relevant to own work, role and responsibilities
- basic principles of risk management and assessment for construction work
- common construction hazards
- common construction safety signage and its meanings
- general construction emergency response and evacuation procedures
- general construction work activities that require licenses, tickets or certificates of competency
- general first aid response requirements
- general procedures for raising OHS issues
- general procedures for reporting OHS hazards, accidents, incidents, emergencies, injuries, near misses and dangerous occurrences
- general procedures for responding to hazards, incidents and injuries
- general workers' compensation and injury management requirements
- OHS hierarchy of controls
- OHS responsibilities and rights of duty holders, including:
 - persons in control of construction work/projects
 - employers and self-employed persons
 - supervisors
 - employees
 - designers
 - inspectors
 - manufacturers and suppliers
- own responsibilities to comply with safe work practices relating to:
 - housekeeping

REQUIRED SKILLS AND KNOWLEDGE

- identification of hazards
- preventing bullying or harassment
- smoking
- use of amenities
- use of drugs and alcohol
- role of OHS committees and representatives
- types of common personal protective equipment and fire safety equipment
- types of OHS information and documentation.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence must confirm personal awareness of the following:

- applicable OHS legislative and safety requirements for construction work including duty of care
- the range of common construction hazards and procedures for the assessment of risk and application of the hierarchy of control
- OHS communication processes, information and documentation including the role of OHS committees and representatives, the meaning of common safety signs and symbols, and procedures for reporting hazards, incidents and injuries
- general procedures for responding to incidents and emergencies including evacuation, first aid, fire safety equipment and PPE.

Context of and specific resources for assessment

- Resources must be available to support the program including participant materials and other information or equipment related to the skills and knowledge covered by the program.
- It is recommended that the assessment tool designed specifically to support this unit of competency will provide consistency in assessment outcomes.
- Where applicable, physical resources should include equipment modified for people with disabilities
- Access must be provided to appropriate assessment support when required.
- Assessment processes and techniques must be culturally appropriate, and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed
- In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge.

EVIDENCE GUIDE

Questioning will be undertaken in such a manner as is appropriate to the oracy, language and literacy levels of the operator, any cultural issues that may affect responses to the questions, and reflecting the requirements of the competency and the work being performed.

Method of assessment

Assessment methods may include more than one of the following:

- practical assessment
- oral questioning
- written test
- work-based activities
- simulated project based activity

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

OHS legislative requirements relate to:

- Australian standards
- construction industry OHS standards and guidelines
- duty of care
- health and safety representatives, committees and supervisors
- licences, tickets or certificates of competency
- National Code of Practice for Induction Training for Construction Work
- national safety standards
- OHS and welfare Acts and regulations
- safety codes of practice.

Duty of care requirements relate to:

- legal responsibility under duty of care to do everything reasonably practicable to protect others from harm

RANGE STATEMENT

- Safe work practices* include:
- own responsibilities to comply with safe work practices, including activities that require licences, tickets or certificates of competency
 - relevant state OHS requirements, including employers and self-employed persons, persons in control of the work site, construction supervisors, designers, manufacturers and suppliers, construction workers, subcontractors and inspectors.
 - access to site amenities, such as drinking water and toilets
 - general requirements for safe use of plant and equipment
 - general requirements for use of personal protective equipment and clothing
 - housekeeping to ensure a clean, tidy and safer work area
 - no drugs and alcohol at work
 - preventing bullying and harassment
 - smoking in designated areas
 - storage and removal of debris.
- Risk* relates to:
- likelihood of a hazard causing injury or harm.
- Principles of risk management* include:
- assessing the risks involved
 - consulting and reporting ensuring the involvement of relevant workers
 - controlling the hazard
 - identifying hazards
 - reviewing to identify change or improvement.
- Hazard* relates to:
- any thing (including an intrinsic property of a thing) or situation with the potential to cause injury or harm.
- Common construction hazards* include:
- confined spaces
 - electrical safety
 - excavations, including trenches
 - falling objects
 - hazardous substances and dangerous goods
 - HIV and other infectious diseases
 - hot and cold working environments
 - manual handling
 - noise
 - plant and equipment

RANGE STATEMENT

Measures for controlling risk to eliminate or minimise hazards in accordance with the hierarchy of control include:

- traffic and mobile plant
- unplanned collapse
- ultraviolet (UV) radiation
- working at heights.

OHS communication processes include:

- elimination
- substitution
- isolation
- engineering control
- administrative control
- personal protective equipment.
- discussions with OHS representatives
- OHS meetings
- OHS notices, newsletters, bulletins and correspondence
- OHS participative arrangements
- processes for raising OHS issues
- toolbox talks
- workplace consultation relating to OHS issues and changes.

OHS information and documentation includes:

- accident and incident reports
- Acts and regulations
- Australian standards
- codes of practice
- construction documentation and plans
- emergency information contact
- evacuation plans
- guidance notes
- job safety analyses
- labels
- material safety data sheets (MSDS)
- proformas for reporting hazards, incidents and injuries
- reports of near misses and dangerous occurrences
- risk assessments
- safe work method statements
- safety meeting minutes
- site safety inspection reports.

Designated OHS personnel includes:

- first aid officers
- OHS committee members

RANGE STATEMENT

- Safety signs and symbols*** include:
- OHS representatives
 - supervisors.
 - emergency information signs (e.g. exits, equipment and first aid)
 - fire signs (e.g. location of fire alarms and firefighting equipment)
 - hazard signs (e.g. danger and warning)
 - regulatory signs (e.g. prohibition, mandatory and limitation or restriction)
 - safety tags and lockout (e.g. danger tags, out of service tags).
- Relevant authorities*** include:
- emergency services (e.g. police, ambulance, fire brigade and emergency rescue)
 - OHS regulatory authority
 - supervisor.
- Incidents*** include:
- accidents resulting in personal injury or damage to property
 - near misses or dangerous occurrences which do not cause injury but may pose an immediate and significant risk to persons or property, and need to be reported so that action can be taken to prevent recurrence, for example:
 - breathing apparatus malfunctioning to the extent that the user's health is in danger
 - collapse of the floor, wall or ceiling of a building being used as a workplace
 - collapse or failure of an excavation more than 1.5 metres deep (including any shoring)
 - collapse or partial collapse of a building or structure
 - collapse, overturning or failure of the load bearing of any scaffolding, lift, crane, hoist or mine-winding equipment
 - damage to or malfunction of any other major plant
 - electric shock.
 - electrical short circuit, malfunction or explosion
 - uncontrolled explosion, fire or escape of gas, hazardous substance or steam
 - any other unintended or uncontrolled incident or event arising from operations carried on at a

RANGE STATEMENT

	workplace.
General procedures for responding to incidents and emergencies include:	<ul style="list-style-type: none"> • basic emergency response (keep calm, raise alarm, obtain help) • evacuation • notification of designated OHS personnel and authorities • notification of emergency services (e.g. when and how) • referring to site emergency plans and documentation.
Emergencies include:	<ul style="list-style-type: none"> • chemical spill • fire • injury to personnel • structural collapse • toxic and/or flammable vapours emission • vehicle/mobile plant accident.
Personal protective equipment includes:	<ul style="list-style-type: none"> • aprons • arm guards • eye protection • gloves • hard hat • hearing protection • high visibility retro reflective vests • protective, well fitting clothing • respiratory protection • safety footwear • UV protective clothing and sunscreen.
Fire safety equipment includes:	<ul style="list-style-type: none"> • breathing apparatus • fire blankets • firefighting equipment.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area

CUFANM302A Create 3D digital animations

Modification History

Not applicable.

Unit Descriptor

<p>Unit descriptor</p>	<p>This unit describes the performance outcomes, skills and knowledge required to animate simple 3D models and create 3D animations.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

<p>Application of the unit</p>	<p>This unit requires the application of basic 3D animation skills to create animations for inclusion in interactive media products, short stand-alone animated sequences and basic games. At this level, animators are working with 3D digital models that have already been created. Animated sequences may include audio components.</p> <p>Animations are created using a range of industry-current software that is constantly evolving, so it is essential that people working in this area keep up to date with the latest software.</p> <p>This unit does not include techniques for stop-motion, cell-analogue and real time animation. Nor does it cover more sophisticated animation techniques used in film, television and high-end games. These are addressed in:</p> <ul style="list-style-type: none"> • CUFANM501A Create 3D digital character animation • CUFANM502A Create 3D digital environments.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Clarify animation requirements	<ol style="list-style-type: none"> 1. With reference to <i>production documentation</i>, clarify <i>3D animation</i> requirements and <i>design specifications</i> in consultation with <i>relevant personnel</i> 2. Examine the models to be animated to determine the most appropriate <i>animation techniques</i> 3. Identify the <i>file format</i> and <i>delivery platform</i> for animated sequences 4. Identify <i>factors</i> that may influence animation design approach 5. In consultation with relevant personnel, clarify work flow sequences to ensure that production schedule deadlines are met
Plan approach	<ol style="list-style-type: none"> 6. Research animations, artworks and other creative sources that may inspire visual design ideas 7. Generate a range of animation ideas that are technically feasible, respond to briefs and provide creative solutions to all design issues 8. Present animation ideas to relevant personnel using appropriate <i>design techniques</i>. 9. Adjust approach to incorporate feedback and agree on final design concepts 10. Discuss and select <i>3D animation software</i> with relevant personnel to ensure that animated sequences meet specified outcomes 11. Analyse <i>audio assets</i> supplied for animations as required
Produce animated sequences for review	<ol style="list-style-type: none"> 12. Create 3D animations using animation techniques to suit design requirements 13. Apply basic <i>animation principles</i>, <i>screen principles</i>, <i>visual design principles</i> and <i>communication principles</i> 14. Apply real world camera techniques to virtual cameras used in 3D animation 15. Render completed animated sequences 16. Save and store animated sequences using appropriate output file formats, standard naming conventions and version control protocols 17. Present 3D animated sequences to relevant personnel for evaluation by agreed deadlines
Finalise animated	<ol style="list-style-type: none"> 18. Review animated sequences to assess creative solutions to design briefs, appropriateness to users/audience and

ELEMENT	PERFORMANCE CRITERIA
sequences	technical feasibility 19. Discuss and confirm with relevant personnel additional requirements or modifications and complete changes as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication, teamwork and literacy skills sufficient to:
 - interpret and clarify written or verbal instructions
 - work as a member of a production team, both independently on assignment and under direction
 - respond constructively to feedback received from other team members
 - complete workplace documentation
- conceptual and creative skills in the context of:
 - generating feasible ideas for animated sequences
 - having a feel for movement and timing in order to produce convincing animations
 - maintaining design integrity
- technical skills sufficient to:
 - use industry-current animation software to develop digitally animated sequences
 - apply the principles of basic screen, visual design and communication to produce 3D animated sequences
 - output 3D animated sequences in appropriate file formats for a range of delivery platforms
 - manage files and directories using standard naming conventions and version control protocols
- self-management and planning skills sufficient to:
 - prioritise work tasks
 - meet deadlines
 - seek expert assistance when problems arise

Required knowledge

- roles and responsibilities of project team members in the relevant industry sector
- basic understanding of the stages in the production process from initial design through to finished product
- issues and challenges that arise in the context of creating 3D digital animations
- basic 3D digital animation techniques
- basic screen principles
- principles of animation
- principles of visual design and communication
- features of a range of delivery platforms

REQUIRED SKILLS AND KNOWLEDGE

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| <ul style="list-style-type: none">• OHS standards as they relate to working for periods of time on computers |
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Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • creation of 3D digital animated sequences that: <ul style="list-style-type: none"> • demonstrate the principles of basic screen, visual design and communication • meet the technical requirements of specific platforms • satisfy the design brief and client requirements • collaborative approach to work • attention to detail • ability to meet production deadlines.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to a range of resources, equipment and current industry-current software as listed in the range statement • where sound is integrated in animated sequences, access to a range of suitable software to support the integration of sound and visual elements • access to appropriate learning and assessment support when required • use of culturally appropriate processes and techniques appropriate to the language and literacy capacity of learners and the work being performed.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence, authenticated show reels and third-party workplace reports of on-the-job performance • critical analysis of a range of 3D digital animated sequences created by the candidate to determine ability to meet design requirements • written or verbal questioning to test knowledge as listed in the required skills and knowledge section of

EVIDENCE GUIDE	
	<p>this unit</p> <ul style="list-style-type: none"> informal questioning and discussion, including response to feedback and diagnostics.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> CUFANM303A Create 3D digital models CUFDIG303A Produce and prepare photo images CUFDIG304A Create visual design components CUFSOU301A Prepare audio assets.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Production documentation</i> may include	<ul style="list-style-type: none"> • animatics • brief • storyboard • technical specifications.
<i>3D animations</i> may include:	<ul style="list-style-type: none"> • 3D elements • 3D panoramas • basic games • buttons • characters • illustrations • logos • models • morphs/blend shapes • puzzles • simulated sequences • text • titles and credits.
<i>Design specifications</i> may include:	<ul style="list-style-type: none"> • characters and objects • key frames • objects • references • samples • script • storyboard • technical specifications, including: <ul style="list-style-type: none"> • output file format • version control protocols • output file size • operating system • hardware specifications, including memory size, RAM • delivery platform

RANGE STATEMENT	
	<ul style="list-style-type: none"> • media form.
<i>Relevant personnel</i> may include:	<ul style="list-style-type: none"> • 3D modeller • 3D producer • animation director • audio asset creator • director • graphic artist/designer • instructional designer • lead animator • matte painter • system support personnel • other technical and specialist personnel.
<i>Animation techniques</i> may include:	<ul style="list-style-type: none"> • acceleration/deceleration • audio integration • dynamic simulation • hierarchies • hinges and pivot points • hybrid method • key frames • layered animation • looping backgrounds • morphing/object exaggeration • motion capture • motion paths • pose to pose animation • registration points • rotation • scripted animation • speed/motion blur • straight-ahead animation.
<i>File formats</i> may include:	<ul style="list-style-type: none"> • AAS • ACT • ANI • ANM • ANS • AVI • AWA • AWM • CEL • CFT

RANGE STATEMENT	
	<ul style="list-style-type: none"> • CMV • DIR/DCR • FLA/SWF • FLC • FLI • FLX • GIF • HTML • IFF • JPEG • LWOB • M3D • MMM • MOV • MPEG • MWF • PNG • QTVR • SEC • TIFF • VAN • VUE.
<i>Delivery platforms</i> may include:	<ul style="list-style-type: none"> • CD • DVD • film • games console • internet • kiosk • mobile phone or device • PDA (personal digital assistant) • video.
<i>Factors</i> may include:	<ul style="list-style-type: none"> • budget • purpose of animation • resources • target audience • timelines.
<i>Design techniques</i> may include:	<ul style="list-style-type: none"> • digitally generated illustrations of objects and/or characters • freehand sketches • fully rendered hand-drawn illustrations

RANGE STATEMENT	
	<ul style="list-style-type: none"> • story trees • storyboards.
<i>Animation software</i> may include:	<ul style="list-style-type: none"> • 3D Studio Max • Cinema 4D • Houdini • Lightwave • Maya • Motionbuilder • Soft Image - XSI.
<i>Audio assets</i> may include:	<ul style="list-style-type: none"> • music • narration • sound effects.
<i>Animation principles</i> may include:	<ul style="list-style-type: none"> • anticipation • asymmetry in body and facial poses • balanced poses • exaggeration • movement in arcs • overlapping actions and follow-through • pacing/timing • secondary actions • singularity of message • squash and stretch • staging • strong silhouette in poses • weight.
<i>Screen principles</i> may include:	<ul style="list-style-type: none"> • camera techniques • editing, including basic transitions • framing • lighting • montage • narrative • story-telling • style/genre.
<i>Visual design principles</i> may include:	<ul style="list-style-type: none"> • balance • composition • emphasis • movement • perspective • proportion

RANGE STATEMENT	
	<ul style="list-style-type: none"> • scale • unity.
<i>Communication principles</i> may include:	<ul style="list-style-type: none"> • communicating the message • conveying meaning • meeting audience requirements • using functional components.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Visual communication - animation and digital effects
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Co-requisite units

Co-requisite units		

CUFANM303A Create 3D digital models

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to create 3D digital models.</p> <p>This unit is a prerequisite for:</p> <ul style="list-style-type: none">• CUFANM401A Prepare 3D digital models for production. <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

<p>Application of the unit</p>	<p>3D modellers working on relatively simple projects apply the skills and knowledge described in this unit. From reference material and established designs, they create 3D models using whatever software is applicable to the production.</p> <p>3D models need to meet technical and design specifications, as well as being efficient, reliable, to scale, and easy to rig and animate.</p> <p>Modellers need to appreciate what will be required of their models in later stages of production because this can affect the work they produce. Close liaison with other team members is, therefore, important. Even though a senior modeller or technical director supervises the creation of models, people at this level are expected to work autonomously within clear guidelines.</p> <p>More complex skills associated with 3D digital modelling are covered in:</p> <ul style="list-style-type: none"> • CUFANM401A Prepare 3D digital models for production.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

<p>Prerequisite units</p>		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Clarify work requirements	<ol style="list-style-type: none"> 1. With reference to <i>production documentation</i>, clarify <i>requirements</i> and <i>purpose</i> for 3D digital models 2. In consultation with <i>relevant personnel</i>, clarify work flow sequences to ensure that <i>production</i> schedule deadlines are met 3. Select <i>software</i> that best suits the type of production and <i>delivery platform</i> for which 3D digital models are being created 4. Gather and analyse <i>reference materials</i> to help with visualisation of 3D models
Create 3D digital models	<ol style="list-style-type: none"> 5. Use software features to block out models to determine correct proportions in relation to reference materials 6. Manipulate software features to apply basic lighting and shaders as required 7. Ensure that models' topology allows appropriate deformation, as required 8. <i>Progressively refine</i> and check <i>integrity</i> of models until they meet design requirements 9. Submit models to relevant personnel for comment on whether production requirements have been met and make final adjustments as required 10. Render and output models in required <i>format</i> and submit to relevant personnel by agreed deadlines 11. Make back-up copies of files and complete workplace documentation according to enterprise procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication, teamwork and literacy skills sufficient to:
 - interpret and clarify written or verbal instructions
 - work as a member of a production team, both independently on assignment and under direction
 - respond constructively to feedback received from other team members
 - complete workplace documentation
- technical skills sufficient to:
 - use industry-current software applications to create 3D models to specifications
 - manage files and directories using standard naming conventions and version control protocols
 - make back-up copies of files and store appropriately
- initiative and creativity in the context of visualising and accurately creating 3D digital models of a range of animate and inanimate objects
- self-management and planning skills sufficient to:
 - prioritise work tasks
 - meet deadlines
 - seek expert assistance when problems arise

Required knowledge

- roles and responsibilities of project team members in the relevant industry sector
- basic understanding of the stages in the production process from initial design through to finished product
- issues and challenges that arise in the context of creating 3D digital models
- 3D digital modelling techniques
- strong sense of scale, form, weight and volume
- geometry as it applies to the creation of realistic 3D digital models
- features of a range of delivery platforms
- OHS standards as they relate to working for periods of time on computers

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • creation of 3D digital models that: <ul style="list-style-type: none"> • demonstrate efficient use of geometry and attention to detail • meet design requirements • collaborative approach to work • ability to meet deadlines.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to a selection of industry-current software as listed in the range statement • access to simulated or real production situations that require the creation of 3D digital models • access to appropriate learning and assessment support when required • use of culturally appropriate processes and techniques appropriate to the language and literacy capacity of learners and the work being performed.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance • evaluation of a range of 3D digital models created by the candidate to determine ability to create models for different kinds of objects • written or verbal questioning to test knowledge as listed in the required skills and knowledge section of this unit.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • CUFANM302A Create 3D digital animations

EVIDENCE GUIDE	
	<ul style="list-style-type: none">• CUVDSP11A Research and apply techniques for illustrative work• CUVVSP16A Research and experiment with techniques to produce drawings.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Production documentation</i> may include:	<ul style="list-style-type: none"> • animatics • brief • storyboard • technical specifications.
<i>Requirements</i> may include:	<ul style="list-style-type: none"> • assets for integration • collaboration with other team members • creative expectations • design specifications • output format • technical specifications • timelines.
<i>Purpose</i> of 3D digital models may be for:	<ul style="list-style-type: none"> • animations • digital simulations, e.g.: <ul style="list-style-type: none"> • architectural models • e-learning resources • demonstration of processes and procedures.
<i>Relevant personnel</i> may include:	<ul style="list-style-type: none"> • 3D designer or concept artist • 3D modeller • art director • director • head of department • matte painter • producer • project manager • storyboard artist • supervisor • technical director • other technical/specialist personnel.
<i>Production</i> may include:	<ul style="list-style-type: none"> • animated productions • commercials • digital media products, e.g.: <ul style="list-style-type: none"> • simulations

RANGE STATEMENT	
	<ul style="list-style-type: none"> • games • e-learning resources • virtual worlds/environments • documentaries • feature films • filmed events or performances • music video • short films • television productions.
<i>Software</i> may include:	<ul style="list-style-type: none"> • 3D, e.g.: <ul style="list-style-type: none"> • 3D Studio Max • Maya • Softimage • graphics, e.g.: <ul style="list-style-type: none"> • Photoshop • Illustrator.
<i>Delivery platforms</i> may include:	<ul style="list-style-type: none"> • broadcast television • CD • DVD • film • internet • Kiosk • mobile phone • PDA (personal digital assistant) • other digital devices.
<i>Reference materials</i> may include:	<ul style="list-style-type: none"> • books • concept drawings and designs • direct observation of actions to be simulated in 3D models • real object on which models are to be based • still images • videos.
<i>Progressive refinements</i> may include:	<ul style="list-style-type: none"> • achieving required shape • achieving required topology.
Aspects to be checked for <i>integrity</i> may include:	<ul style="list-style-type: none"> • double faces • isolated vertices • pivot points • resetting transform • scale of models relative to other components in

RANGE STATEMENT	
	final sequences.
<i>Formats</i> may include:	<ul style="list-style-type: none"> • AVI • IFF • JPEG • MPEG • PNG • Quicktime • Targa • TIFF.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Visual communication - Animation and digital effects
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Co-requisite units

Co-requisite units	

CUFANM502A Create 3D digital environments

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to create 3D digital environments. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.
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Application of the Unit

<p>Application of the unit</p>	<p>3D environment artists working in 3D animation, games and graphics studios apply the skills and knowledge described in this unit. From reference material and established designs, they create 3D environments using the software application most appropriate to the production. 3D environments need to meet technical and design specifications, as well as being efficient, reliable and to scale.</p> <p>Environment artists need to appreciate what will be required of their environments in later stages of production because this can affect the work they produce. Even though environment artists at this level work with a fair degree of autonomy, they are members of a production team and must be able to take direction and communicate clearly with colleagues.</p> <p>3D environments are created using a range of industry-current software that is constantly evolving, so it is essential that people working in this area keep up to date with the latest software.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

<p>Prerequisite units</p>		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Clarify work requirements	<ol style="list-style-type: none"> 1. With reference to <i>production documentation</i>, determine <i>requirements</i> and <i>purpose</i> for 3D digital environments 2. In consultation with <i>relevant personnel</i>, determine work flow sequences to ensure that production schedule deadlines are met 3. Select <i>software</i> that best suits the type of production and <i>delivery platform</i> for which 3D digital environments are being created 4. Gather and analyse <i>reference materials</i> to help with visualisation of 3D environments
Create 3D digital environments	<ol style="list-style-type: none"> 5. Use software features to build a previsualisation of environments in relation to reference materials and submit to relevant personnel for approval 6. Build environment models and <i>progressively refine</i> models until they meet design requirements 7. Check <i>integrity</i> of models and ensure <i>spatial relationship</i> meets design requirements 8. Apply texture coordinates as required 9. Create and incorporate matte paintings as required 10. Manipulate software features to apply lighting and shaders as required 11. Experiment with different <i>lighting rigs</i> and select a rig that meets design requirements 12. Continuously refine all aspects of 3D digital environments until the required creative effect is achieved 13. Submit environments to relevant personnel for comment on whether production requirements have been met and make final adjustments as required
Finalise projects	<ol style="list-style-type: none"> 14. Render and output environments in required <i>format</i> and submit to relevant personnel by agreed deadlines 15. Finalise projects according to enterprise procedures, such as making back-up copies of files and completing workplace documentation 16. Participate in project evaluations and contribute ideas and suggestions about ways to improve future projects

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication, teamwork and literacy skills sufficient to:
 - interpret creative concepts and briefs
 - interpret information in software user manuals and help features
 - work as a member of a production team, both independently on assignment and under direction
 - respond positively to constructive feedback from other team members
- initiative and enterprise in the context of:
 - visualising and accurately creating 3D digital environments
 - finding creative solutions to problems identified during the process of creating 3D digital environments
 - locating and using resources to broaden own creative experience
- technical skills sufficient to:
 - use appropriate software to develop 3D digital environments
 - create 3D digital environments in appropriate formats for required delivery platforms
 - manage files and directories using standard naming conventions and version control protocols
- self-management and planning skills sufficient to:
 - prioritise work tasks
 - plan the creation of 3D digital environments in a logical and cohesive way
 - meet deadlines
 - seek expert assistance as required
- learning in the context of improving performance/product through self-reflection and reworking after feedback

Required knowledge

- industry knowledge, including:
 - roles and responsibilities of project team members in the relevant industry sector
 - sound understanding of the relationship between the technical and creative aspects and requirements of productions for which 3D digital environments are being created
 - understanding of the stages in the production process from initial design through to the finished product
 - issues and challenges that arise in the context of creating 3D digital

REQUIRED SKILLS AND KNOWLEDGE

environments

- the features of a range of delivery platforms
- digital modelling techniques appropriate to the development of 3D environments
- demonstrated use of scale, form, weight and volume
- geometry as it applies to the creation of realistic 3D digital environments
- OHS standards as they relate to working for periods of time on computers

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • creation of 3D digital environments that: <ul style="list-style-type: none"> • demonstrate efficient use of geometry and attention to detail • meet design requirements • collaborative approach to work • ability to meet deadlines.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to a selection of industry-current software as listed in the range statement • access to simulated or real production situations that require the creation of 3D digital environments • access to appropriate learning and assessment support when required • use of culturally appropriate processes and techniques appropriate to the language and literacy capacity of learners and the work being performed.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance • evaluation of a range of 3D digital environments created by the candidate to determine ability to create different kinds of environments • written or verbal questioning to test knowledge as listed in the required skills and knowledge section of this unit.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • BSBCRT402A Collaborate in a creative process

EVIDENCE GUIDE

- CUFANM401A Prepare 3D digital models for production
- CUVDSP11A Research and apply techniques for illustrative work
- CUVVSP16A Research and experiment with techniques to produce drawings.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Production documentation</i> may include:</p>	<ul style="list-style-type: none"> • storyboard • animatics • technical specifications • creative documentation • top-down drawings/maps • concept drawings • architectural drawings.
<p><i>Requirements</i> may include:</p>	<ul style="list-style-type: none"> • technical specifications • design specifications • creative expectations • output format • assets for integration • timelines • collaboration with other team members.
<p><i>Purpose</i> of 3D digital environments may be for:</p>	<ul style="list-style-type: none"> • animations • digital simulations, e.g.: <ul style="list-style-type: none"> • architectural models • e-learning resource • demonstration of processes and procedures • games • film/television productions.
<p><i>Relevant personnel</i> may include:</p>	<ul style="list-style-type: none"> • 3D modeller • matte painter • 3D designer or concept artist • art director • project manager • director • producer • supervisor • technical director • head of department • storyboard artist

RANGE STATEMENT	
	<ul style="list-style-type: none"> • other technical/specialist personnel.
<i>Software</i> may include:	<ul style="list-style-type: none"> • graphics, e.g.: <ul style="list-style-type: none"> • Photoshop • Illustrator • 3D, e.g.: <ul style="list-style-type: none"> • 3D Studio Max • Maya • Softimage.
<i>Delivery platforms</i> may include:	<ul style="list-style-type: none"> • feature film • broadcast television • games • internet • CD • mobile phone • kiosk • DVD • PDA (personal digital assistant) • other digital devices.
<i>Reference materials</i> may include:	<ul style="list-style-type: none"> • real environments that are to be reproduced digitally • videos • still images • books • direct observation of actions to be simulated in 3D environments • concept drawings and designs.
<i>Progressive refinements</i> may include:	<ul style="list-style-type: none"> • achieving required shape • achieving required topology.
Aspects to be checked for <i>integrity</i> may include:	<ul style="list-style-type: none"> • pivot points • scale of models relative to other components in final sequences • isolated vertices • double faces • resetting transform.
Aspects to be checked for <i>spatial relationship</i> may include:	<ul style="list-style-type: none"> • relevant design principles, e.g.: <ul style="list-style-type: none"> • balance • proportion • accuracy • functionality

RANGE STATEMENT	
	<ul style="list-style-type: none"> • game-play requirements.
<i>Lighting rigs</i> may include:	<ul style="list-style-type: none"> • light domes • global illumination • radiosity • standard lights.
<i>Formats</i> may include:	<ul style="list-style-type: none"> • TIFF • JPEG • IFF • Quicktime • AVI • MPEG • Targa • PNG.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Visual communication - animation and digital effects
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Co-requisite units

Co-requisite units		

CUFDIG303A Produce and prepare photo images

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to prepare photo images for integration into an interactive media sequence or product.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This role may be assigned to a graphic artist or, in a larger project, to a photographer who works closely with a programmer or interactive media author to publish required images.</p> <p>The photography ranges from digital still composition to panoramas for the production of virtual worlds. Photo images can include landscapes, objects and portraits.</p> <p>Specialist skills associated with photography are covered in:</p> <ul style="list-style-type: none"> • CUVPHI06A Plan and carry out image capture in response to a brief.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Use scanner to capture photo images	<ol style="list-style-type: none"> 1. Source and select appropriate photographic images according to requirements of photographic <i>project</i> brief 2. Discuss selection of images with <i>relevant personnel</i> 3. Assess <i>scanner features</i> to ensure that outcomes will meet the requirements of brief 4. Operate scanner according to manufacturer specifications 5. Select <i>scanner settings</i> to ensure image capture meets production requirements 6. Transfer and store photographic image files to a computer using standard naming conventions
Use digital camera to create photo images	<ol style="list-style-type: none"> 7. Discuss photographic project brief with relevant personnel 8. Assess <i>digital camera features</i> to ensure that outcomes will meet the requirements of brief 9. Plan camera shots taking into account lighting, framing, composition and other <i>photographic techniques</i> 10. Load and operate digital camera according to manufacturer specifications 11. Consider digital camera focus, exposure and shutter speed to ensure image capture meets production requirements 12. Check photographic images for fitness of purpose to comply with brief 13. Transfer and store photographic image files to a computer using standard naming conventions
Edit photo images	<ol style="list-style-type: none"> 14. Load <i>digital imaging software</i> and import photo image source files 15. <i>Manipulate</i> and save digital images using designated digital imaging software 16. Create photo images that incorporate <i>visual design</i> and <i>communication principles</i> using designated digital imaging software 17. Evaluate the outcome for visual impact, effectiveness and fitness for purpose 18. Confirm outcome with relevant personnel
Prepare photo image assets	<ol style="list-style-type: none"> 19. Save files in appropriate <i>output format</i> to meet <i>platform</i> requirements 20. Assign <i>metadata tags</i> if required

ELEMENT	PERFORMANCE CRITERIA
	21. Group files logically in a folder system using standard naming conventions 22. Store files in share drive or repository for production team access

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills sufficient to:
 - interpret and clarify written or verbal instructions
 - consult equipment operation manuals
- ability to work as a member of a production team - both independently on assignment and under direction
- technical skills sufficient to:
 - proficiently use a scanner to reproduce photo images to specification
 - proficiently use a digital camera to create well-composed photo images
 - proficiently use digital imaging software to manipulate and prepare photo images
 - manage files using standard naming conventions
- self-management skills sufficient to:
 - work under pressure
 - meet deadlines
 - seek expert assistance when problems arise
- problem-solving skills sufficient to anticipate and resolve minor equipment set-up problems

Required knowledge

- basic photographic techniques
- basic principles of visual design and communication
- appropriate file formats for various platforms
- industry knowledge, including:
 - roles and responsibilities of project team members, e.g. designers, content creators, information architects, programmers and coders
 - basic understanding of the relationship between technical and creative aspects and requirements of interactive media projects
 - basic knowledge of the features of a range of delivery platforms
- OHS regarding the use of scanners, cameras and computers, and handling and disposing of lithium batteries

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • ability to use digital imaging software to prepare high quality photo images that satisfy the requirements of a range of briefs • efficient operation of a scanner and digital camera to capture images.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to a range of resources and equipment currently used by industry, including: <ul style="list-style-type: none"> • flatbed scanner • digital camera • industry-standard graphics software • access to appropriate learning and assessment support when required • use of culturally appropriate processes and techniques appropriate to the language and literacy capacity of learners and the work being performed.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance • evaluation of photo images prepared by the candidate on a number of occasions • practical demonstration by the candidate of scanner and digital camera operation • written or oral questioning to test knowledge of file formats and OHS issues.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • CUFDIG304A Create visual design components.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<i>Projects</i> may include:	<ul style="list-style-type: none"> • e-commerce • educational product • game • information product • promotional product • training product • website.
<i>Relevant personnel</i> may include:	<ul style="list-style-type: none"> • client • designer • graphic artist • interactive media author • programmer, coder and technical support people • supervisor • web manager • other specialist creative and administrative staff.
<i>Scanner features</i> may include:	<ul style="list-style-type: none"> • bit depth • dynamic range • optical resolution • output format (e.g. RGB, greyscale or CMYK) • platen size • reflective or transmissive (film) • range of film holders.
<i>Scanner settings</i> may include:	<ul style="list-style-type: none"> • bit depth • colour or greyscale • colour/target/working space • crop • destination • dust and scratch handling (e.g. ICE, FARE) • grain management (e.g. GEM) • multi-sampling

RANGE STATEMENT	
	<ul style="list-style-type: none"> • orientation • output dimension and resolution or file size • preferences/options • restoration of colour (e.g. ROC) • scaling • sharpening • source image type • tones, contrast, colour cast, saturation.
<i>Digital camera features</i> may include:	<ul style="list-style-type: none"> • aperture • automatic, program or manual settings • batteries • colour, target, working space • compatibility with hardware and digital imaging software • exposure compensation • file format • flash, fill flash • lens focal lengths, such as wide angle, close-up and telephoto • menu functions • resolution - megapixels • shutter speed • size and type of memory card(s) • subject modes • white balance.
<i>Photographic techniques</i> may include:	<ul style="list-style-type: none"> • composition • depth of field • dynamic range • field of view • framing • lighting.
<i>Digital imaging software</i> may include:	<ul style="list-style-type: none"> • a wide range of programs, e.g.: <ul style="list-style-type: none"> • Adobe Photoshop • Adobe Photoshop Elements • Adobe Photoshop Lightroom • Apple Aperture • Corel Paint Shop Pro • Corel PhotoPaint • GNU Image Manipulation Program (GIMP and GIMPshop).

RANGE STATEMENT	
<i>Manipulating</i> digital images may include:	<ul style="list-style-type: none"> • appending text/type for files and captions • brushing • creating artistic effects • cropping • editing • eliminating red eye • emulating photographic effects • image enhancement including tones, contrast, colour cast/tint, saturation • masking layers • retouching (i.e. cloning, rubber stamping, healing, patching) • sharpening • stitching (panoramic scenes) • using layers for composites • using pre-sets.
<i>Visual design principles</i> may include:	<ul style="list-style-type: none"> • balance • emphasis • movement • perspective • proportion • scale • unity.
<i>Communication principles</i> may include:	<ul style="list-style-type: none"> • communicates message • conveys meaning • meets audience requirements • uses functional components.
<i>Output formats</i> may include:	<ul style="list-style-type: none"> • GIF • JPEG • PDF • PICT • PNG • PSD • TIFF.
<i>Platforms</i> may include:	<ul style="list-style-type: none"> • CD • DVD • games console • internet • kiosk • mobile phone

RANGE STATEMENT	
	<ul style="list-style-type: none"> • other video playback devices • personal digital assistant (PDA) • video player (iPods).
<i>Metadata tags</i> may include:	<ul style="list-style-type: none"> • author • copyright notice • date of capture/date created • description • EXIF and IPTC standards • file size • format • headline/caption • keywords/subject • location/GPS coordinates • resolution • rights usage terms • roll/identifier # • subject • time • title • version.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Visual communication - digital content and imaging
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Co-requisite units

Co-requisite units	

Co-requisite units		

CUFDIG304A Create visual design components

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to create visual designs for a range of interactive media components.</p> <p>People in this role work closely with other members of a production team. They create visual design components in response to specifications and under the supervision of a graphic designer or producer. They contribute creative ideas to the overall concept that needs to take account of technical considerations, such as the final delivery platform.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit requires the application of the key principles and practice of graphic design in the context of creating visual design components that could be integrated into a range of media products, including print media.</p> <p>A graphic artist usually undertakes this role and is expected to be competent in a range of design techniques, including freehand drawing. The visual design output will nevertheless be in a digital format for inclusion in a final media product.</p> <p>More complex skills associated with visual design aspects of a whole interactive media product are covered in:</p> <ul style="list-style-type: none"> • CUFDIG402A Design user interfaces • CUFDIG403A Create user interfaces.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Clarify work requirements	<ol style="list-style-type: none"> 1. Clarify type of visual design <i>components</i> required, in consultation with <i>relevant personnel</i> 2. In discussion with relevant personnel, identify factors that may determine or affect visual design concepts, including <i>design techniques</i> 3. Clarify in discussion with relevant personnel the target user and audience, and determine <i>format</i> and <i>delivery platform</i>
Generate and assess ideas	<ol style="list-style-type: none"> 4. Review media products, designs, images, artwork and other creative sources that may inspire visual design ideas 5. Obtain other <i>relevant information</i> that may influence design ideas 6. Generate a range of visual design ideas that are technically feasible, respond to specifications and provide creative solutions to all design issues 7. Present visual design ideas to relevant personnel using design techniques
Plan approach	<ol style="list-style-type: none"> 8. Experiment with traditional and digital imaging techniques to create required visual design components 9. Explore range of <i>typographical</i> and <i>visual design elements</i> to create the components 10. Evaluate initial design ideas and specifications against findings and discuss with relevant personnel to select final design concept 11. Select design technique and discuss with relevant personnel to ensure appropriate output format meets delivery platform requirements
Produce visual design components	<ol style="list-style-type: none"> 12. Develop structure for components based on the final design concept using selected design techniques 13. Apply <i>visual design principles</i> and <i>communication principles</i> to produce components 14. Save visual design in an appropriate format that satisfies the technical parameters determined in consultation with relevant personnel
Finalise visual design components	<ol style="list-style-type: none"> 15. Review visual design components to assess whether creative solutions meet design and technical specifications 16. Discuss and confirm with relevant personnel additional requirements or modifications and undertake any

ELEMENT	PERFORMANCE CRITERIA
	necessary amendments

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication, teamwork and literacy skills sufficient to:
 - interpret and clarify written and verbal instructions
 - work as a member of a production team - both independently on assignment and under direction
 - respond constructively to feedback received from other team members
- initiative and enterprise in the context of generating a range of feasible ideas for visual designs
- technical skills sufficient to:
 - use a range of design techniques for creating visual designs, including industry-standard graphics software
 - apply visual design and communication principles to produce visual designs
 - create visual design components in appropriate formats for a range of delivery platforms
 - manage files and directories using standard naming conventions
- self-management and planning skills sufficient to:
 - prioritise work tasks
 - meet deadlines
 - seek expert assistance when problems arise

Required knowledge

- industry knowledge, including:
 - roles and responsibilities of project team members
 - basic understanding of the relationship between technical and creative aspects and requirements of media projects
- basic design principles of layout and composition
- characteristics of digital and traditional imaging
- visual design and communication principles
- typography
- copyright clearance procedures
- OHS standards as they apply to the use of computer and keyboard for periods of time

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • creation of visual design components that respond effectively to specifications and demonstrate the application of visual design and communication principles • ability to apply a selection of the design techniques listed in the range statement • ability to work collaboratively in a team environment.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • access to a range of resources, equipment and current industry-standard software as listed in the range statement • access to appropriate learning and assessment support when required • use of culturally appropriate processes and techniques appropriate to the language and literacy capacity of learners and the work being performed.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance • evaluation of a range of visual design components created by the candidate • written or oral questioning to test knowledge of visual design principles, communication principles and responsibilities of different members of a project team.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • CUFDIG303A Produce and prepare photo images

EVIDENCE GUIDE

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| | <ul style="list-style-type: none">• CUFANM301A Create 2D digital animations. |
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Components may include:

- 2D animation objects
- backgrounds
- banners
- basic user interfaces
- colours
- flow charts
- icons
- illustrations
- interactive buttons
- interactive controls
- logos
- simple 2D animation characters
- text
- titles
- other components required by the project.

Relevant personnel may include:

- art director
- asset creator
- client
- editor
- producer
- programmer
- supervisor
- technical director
- technical staff
- other specialist creative and administrative staff.

Design techniques may include:

- drawing freehand
- drawing on a tablet
- flow charts
- scanning drawings and photographs
- storyboards
- thumbnail sketches

RANGE STATEMENT	
	<ul style="list-style-type: none"> • using graphics software, such as: <ul style="list-style-type: none"> • Corel Draw • Corel Paint Shop Pro • Photoshop • Photoshop Elements • Illustrator • Paint.net • Fireworks.
<i>Format</i> may include:	<ul style="list-style-type: none"> • bitmap image • digital formats, such as: <ul style="list-style-type: none"> • GIF • JPEG • PDF • TIFF • PICT • PNG • PSD • HTML • hard copy • vector image.
<i>Delivery platform</i> may include:	<ul style="list-style-type: none"> • CD • DVD • film • games console • internet • kiosk • mobile phone • other wireless/mobile devices • personal digital assistant (PDA) • print media • television.
<i>Relevant information</i> may include:	<ul style="list-style-type: none"> • brands • logos • previous versions of components • printed materials • promotion materials • style guides • trademarks.

RANGE STATEMENT	
<i>Typographical design elements</i> may include:	<ul style="list-style-type: none"> • alignment • fonts and typefaces • kerning • leading • point and size • serif or sans serif • tracking.
<i>Visual design elements</i> may include:	<ul style="list-style-type: none"> • colour • form • line • shape • texture • tone.
<i>Visual design principles</i> may include:	<ul style="list-style-type: none"> • balance • emphasis • focal point • movement • perspective • proportion • scale • unity.
<i>Communication principles</i> may include:	<ul style="list-style-type: none"> • communicates message • conveys meaning • meets audience requirements • uses functional components.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Visual communication - digital content and imaging
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Co-requisite units

Co-requisite units		

CUFDIG507A Design digital simulations

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to design digital simulations. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.
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Application of the Unit

Application of the unit	<p>The range of digital simulations covered in this unit is broad, and could include virtual world environments for architecture; virtual instruments and equipment for science and engineering; or natural and technical processes and procedures in medicine, conservation and manufacturing.</p> <p>As these simulations are based on real world environments and processes, designers need to work closely with experts in the field to understand the dynamics of the processes and to be able to model these in a virtual environment.</p> <p>The unit also requires working collaboratively with programmers and software authors to ensure the simulation can be technically achieved.</p> <p>As the application for simulation is broad, including demonstration and training, this unit relates to other design units, including:</p> <ul style="list-style-type: none"> • CUFDIG503A Design e-learning resources • CUFDIG504A Design games.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
Identify project requirements	<ol style="list-style-type: none"> 1. Confirm objectives and desired outcomes of briefs in consultation with <i>relevant personnel</i> 2. Identify target audience and determine format and <i>delivery platform</i> of simulations through discussion with relevant personnel
Research and plan approach	<ol style="list-style-type: none"> 3. Investigate fully the <i>real world environment</i> that is to be simulated 4. Obtain designs, plans and other information that may assist in modelling the real world environment 5. Determine the <i>performance objectives</i>, task complexity and required levels of user skill 6. Determine the required depth of physical and functional fidelity, taking into account <i>production requirements</i> 7. Research and select appropriate simulation <i>authoring tools</i> 8. Discuss ideas and collaborate, as required, with relevant personnel to ensure contribution of a range of ideas and creative solutions
Draft simulation design documents	<ol style="list-style-type: none"> 9. Identify the <i>processes</i> that determine the functional behaviour and specify how this behaviour is to be represented by <i>control objects</i> 10. Define the underlying functionality in a model that specifies the essential settings, states, conditions and parameters 11. Specify the <i>user interface controls</i> that enable users to interact with simulations 12. Identify critical impacts, alerts or costs for incorrect user operation 13. Specify positive and negative user feedback 14. Specify the sequencing of levels of difficulty 15. Present draft <i>simulation design documents</i> for discussion with and feedback from other team members
Finalise simulation design documents	<ol style="list-style-type: none"> 16. Review designs against required project outcomes and performance objectives 17. Review designs to ensure they meet creative, technical and legislative requirements 18. Adjust designs as necessary after discussions with relevant personnel and incorporating user feedback 19. Save and archive user interface controls for other

ELEMENT	PERFORMANCE CRITERIA
	projects

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication, teamwork and literacy skills sufficient to:
 - interpret and clarify project briefs
 - establish rapport with clients
 - work collaboratively in a team environment to find the best design solutions
 - clearly and concisely document specifications for the design of the digital simulation
- initiative and enterprise in the context of:
 - generating ideas for the design of digital simulations that meet the specified performance objectives
 - thinking laterally when developing ideas
 - maintaining design integrity
- technical skills sufficient to:
 - create storyboards, state-charts and other diagrams to specify the architecture and navigation of digital simulations
 - design simulations that represent a real world environment to the required level of fidelity
- self-management skills sufficient to:
 - meet deadlines
 - provide appropriate and timely documentation

Required knowledge

- industry knowledge, including:
 - roles and responsibilities of project team members, e.g. designers, content creators, information architects, programmers and coders
 - issues and challenges that arise in the context of designing and developing digital simulations
- typical formats and techniques for documenting the design of digital simulations
- OHS standards as they relate to working for periods of time on computers
- way in which algorithms, laws, rules and mathematical formulas can represent real world processes
- intellectual property rights and copyright clearance procedures

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • design specifications for digital simulations that: <ul style="list-style-type: none"> • are well documented and clearly presented • meet performance requirements • are technically feasible • ability to work effectively as a member of a design team.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • practical demonstration of skills through the design of at least two digital simulations • access to briefs for digital simulations on which designs can be based • access to appropriate learning and assessment support when required • use of culturally appropriate processes and techniques appropriate to the language and literacy capacity of learners and the work being performed.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third-party workplace reports of on-the-job performance • evaluation of digital simulation designs documented by the candidate and of their quality in terms of meeting performance requirements • written or oral questioning to test knowledge as listed in the required skills and knowledge section of this unit • case studies to assess ability to develop digital simulations for a range of real world environments.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended,

EVIDENCE GUIDE	
	for example: <ul style="list-style-type: none">• CUFDIG503A Design e-learning resources• CUFDIG504A Design games• CUFDIG506A Design interaction.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p><i>Relevant personnel</i> may include:</p>	<ul style="list-style-type: none"> • art director • client • designer • expert • graphic artist • head of department • programmer • publisher • script writer • software engineer • other technical and creative staff.
<p><i>Delivery platforms</i> may include:</p>	<ul style="list-style-type: none"> • CD/DVD • games console • internet • mobile phone • personal digital assistant (PDA) • other wireless/mobile devices.
<p><i>Real world environments</i> may include:</p>	<ul style="list-style-type: none"> • device • equipment • machine • natural habitat • procedure • process • social environment • spatial environment • system • tool.
<p><i>Performance objectives</i> may include:</p>	<ul style="list-style-type: none"> • control • dexterity • judgement • knowledge • memory

RANGE STATEMENT	
	<ul style="list-style-type: none"> • perception • proficiency • recall • reflection • speed and accuracy of decision making and problem solving • understanding.
<i>Production requirements</i> may include:	<ul style="list-style-type: none"> • budget • schedules • staff expertise • timelines.
<i>Authoring tools</i> may include:	<ul style="list-style-type: none"> • authoring software, such as: <ul style="list-style-type: none"> • Dreamweaver • GoLive • Contribute • Breeze • Captivate • Authorware • Flash • Director • PageMill • RoboDemo • simulation software, such as LabView • scripting using languages, such as: <ul style="list-style-type: none"> • CC++ • Java • ActionScript • Lingo.
<i>Processes</i> may include:	<ul style="list-style-type: none"> • astrological • biological • chemical • electrical • environmental • mechanical • mental • physical • social.
<i>Control objects</i> may include:	<ul style="list-style-type: none"> • algorithms • forces

RANGE STATEMENT	
	<ul style="list-style-type: none"> • laws • mathematical formulas • rules.
<i>User interface controls</i> may include:	<ul style="list-style-type: none"> • buttons • clocks • dials • gauges • handles • joysticks • keyboards • keypads • knobs • lamps • levers • meters • sliders • switches • timers • valves • wheels.
<i>Simulation design documents</i> may include:	<ul style="list-style-type: none"> • diagrams • flow charts • maps • plans • state-charts • storyboards • technical specifications • user interface mock-ups • wire frames.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Visual communication - digital content and imaging
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Co-requisite units

Co-requisite units		

CULMS010B Contribute to the preservation of cultural material

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This unit describes the performance outcomes, skills and knowledge required to contribute to the preservation of cultural material through a sound knowledge of conservation principles, practices and ethics and the application of basic preservation activities.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Application of the unit

This unit applies to individuals who have significant knowledge of preservation issues and may be involved in the application of basic preservation techniques with the involvement of a professional conservator.

The content of this unit relates to work that has a significant impact on Australia's cultural heritage and care must be taken to ensure appropriate implementation of the unit.

Any individual or organisation planning to undertake training and/or assessment of this unit must therefore consult with an appropriately qualified conservator or conservation organisation. The Australian Institute for the Conservation of Cultural Material is the recognised professional body in this area.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability Skills The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary for the qualification in which this unit of competency is packaged, will assist in identifying Employability Skills requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|---|
| 1 Develop preservation skills and knowledge | <p>1.1 Seek and access <i>opportunities to develop, update and maintain knowledge of preservation</i> issues and concepts</p> <p>1.2 Integrate knowledge into work activities within scope of individual responsibility</p> |
| 2 Undertake basic preservation activities | <p>2.1 Undertake <i>basic preservation activities</i> within scope of responsibility as agreed with a conservator and in accordance with <i>organisational plans and policies</i></p> <p>2.2 Correctly apply techniques in a manner which</p> |

ELEMENT

PERFORMANCE CRITERIA

- maintains the integrity of the *cultural material*
- 2.3 Record data generated in the course of activities clearly and accurately in the appropriate format
- 2.4 Follow *health, safety and environmental requirements* at all times
- 2.5 Ensure that ethical and *cultural protocols* are adhered to at all times

Required Skills and Knowledge

Required Skills and knowledge

This section describes the skills and knowledge required for this unit.

Required skills

- learning skills to undertake ongoing professional development and acquisition of knowledge around preservation issues and concepts
- literacy skills to interpret conservation plans, to research conservation information, document and to report on condition of cultural material.

Required knowledge

- distinction between preservation, conservation and restoration
- basic preservation principles and methods
- principles and methods for handling cultural material
- available sources of appropriate expert advice
- AICCM Code of Ethics and Code of Practice
- copyright, moral rights and intellectual property legislation and issues that impact on conservation
- cultural protocols that impact on conservation of cultural material, including those for Aboriginal or Torres Strait Islander material
- role of a conservator and of a person working under the guidance of a conservator, including the scope of work undertaken by each and rationale for this
- requirements for safe work and manual handling
- formats and features of conservation plans, object condition reports.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- sound general knowledge of preservation techniques relevant to the collection/industry sector
- understanding of conservation ethics and cultural protocols, including limitations on the scope of work to be undertaken
- practical demonstration of competent and safe techniques working on one or more items under the guidance of a conservator.

Context of and specific resources for assessment

Assessment must ensure:

- access to cultural material
- access to equipment, materials and tools used in basic preservation activities.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate
- assessment of cultural material on which the candidate has worked
- direct observation of the candidate using techniques
- evaluation of candidate's responses to different collection scenarios to assess ability to develop approaches for different preservation needs and articulate different challenges and issues to be considered
- oral or written questioning to assess knowledge of different techniques and procedures.

Holistic assessment with other units relevant to the

EVIDENCE GUIDE

industry sector, workplace and job role is recommended, for example:

- CULMS009B Implement preventive conservation activities.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Opportunities to develop, update and maintain knowledge of preservation issues and concepts may include:

- research
- attendance at seminars, workshops
- membership of professional organisations
- using conservator as a mentor
- reading current journals, newsletters and electronic discussion lists

Basic preservation activities will vary depending on the type of cultural material, but may include:

- surface cleaning
- designing/making storage enclosures and display supports
- attaching backboards to paintings
- creating hanging systems for paintings
- mounting and framing

Activities must be undertaken in accordance with advice from a specialist conservator to avoid potential damage to cultural material.

RANGE STATEMENT

Organisational plans and policies vary in structure and name but may include:

- preservation plans
- conservation plans
- collection management policies
- disaster preparedness policies

Cultural material is defined as 'objects, collections, artworks, specimens, structures or sites' and includes:

- archaeological material
- books and manuscripts
- cultural sites/buildings
- ethnographic material
- flora and fauna
- film/audiovisual material
- furniture
- photographs
- technological/industry items
- textiles
- works on paper/canvas

Health, safety and environmental requirements may relate to:

- use of chemicals or other toxic substances
- storage of chemicals
- provision and use of safety equipment
- safe manual handling
- safe use of tools and equipment
- reporting of occupational health and safety issues, including events and near misses
- impact on other parts of the collection
- toxic and hazardous materials in a collection
- condition/stability of item (dirt, mould, dust and pesticides)

RANGE STATEMENT

Cultural protocols may relate to:

- who can handle the cultural material
- where an item may be handled
- when an item may be handled
- consultation on potential treatments
- storage requirements
- appearance of the item
- relationship between item and other material in the collection
- methods and approaches to display

Unit Sector(s)

Not applicable.

Competency field

Competency field Preventive Conservation

CUVCOR04B Originate concept for own work and conduct critical discourse

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the skills and knowledge required to originate the concept and conduct critical discourse about the concept for own work. The concept encompasses ideas, form and context for the work. The unit includes the need for research and analysis of ideas and references, plus the creation of innovative concepts. It also includes a requirement for critical and informed discourse with others about one's own work. This unit both encompasses and goes beyond unit CUVCOR03B Develop, refine and communicate concept for own work.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

This unit underpins many specialisation units and combined assessment and/or training with those units is highly recommended.

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|----------------------------------|--|
| 1 Research concept ideas. | 1.1 Identify and <i>source</i> references which may inform concept development.
1.2 Critically analyse sources and references in the context of current work.
1.3 Collect, collate and analyse references to inform <i>concept</i> development. |
| 2 Generate concept. | 2.1 Develop a range of different, innovative and creative approaches for the concept based on the nature of own artistic practice.
2.2 Reflect on and integrate ideas generated from research.
2.3 Consider possible <i>constraints</i> for the concept, based on nature and purpose of work.
2.4 Continuously reflect on and appraise ideas for the concept.
2.5 Synthesise and refine concept based on research, reflection and relevant constraints. |

ELEMENT**PERFORMANCE CRITERIA**

- | | |
|--------------------------------------|---|
| 3 Conduct critical discourse. | <ul style="list-style-type: none">3.1 Identify <i>relevant individuals</i> to participate in critical <i>discourse</i> about work concepts.3.2 Identify potential ways in which discourse may be undertaken, and select the most appropriate.3.3 Provide key information on work concepts and concept <i>development</i> including influences, evaluation of options and <i>problem-solving strategies</i>.3.4 Use effective communication techniques to generate discussion, debate and critical analysis of the concept. |
| 4 Adjust and refine concept. | <ul style="list-style-type: none">4.1 Undertake own analysis of concept and challenge ideas and approaches taken.4.2 Seek input and comments from others about the concept.4.3 Re-evaluate and refine options for the concept based on own analysis and critical discourse with others. |

Required Skills and Knowledge

Required Skills and knowledge

This section describes the skills and knowledge required for this unit.

Required skills:

- literacy skills sufficient to research and evaluate a wide range of source materials for the development of the concept for own work
- literacy skills sufficient to conduct a critical discourse about the concept for own work.

Required knowledge:

- a wide range of sources of information pertaining to the development of the concept
- in-depth appropriate communication methods to encourage critical discourse about the concept for own work
- the theoretical and philosophical context for concept development
- other artists/designers/curators/arts administrators and their development of concepts for their own work
- thorough knowledge of the elements and principles of design and how they may be used in the development of the concept for own work
- copyright, moral rights and intellectual property issues and legislation which assist the development and critical discourse of the concept for own work.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The following evidence is critical to the judgement of competence in this unit:

- development of the concept through a process of selecting and critically analysing source material,

EVIDENCE GUIDE

then synthesising and refining the concept for own work

- effective participation in a critical discourse about the concept for own work which shows a command of relevant references, terminologies and ideas.

Context of and specific resources for assessment

The assessment context must provide for:

- practical demonstration of skills through research and concept generation through multiple pieces of work
- interaction with others in a critical discourse about the concept for own work.

Method of assessment

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- participation in a critical discourse on the candidate's work concepts
- discussion and questioning about research and development processes
- written and/or verbal reports
- visual presentation, including diagrams, charts, slides, using digital technology
- review of portfolios of evidence
- third party workplace reports of performance by the candidate.

Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities and people who may have literacy or numeracy difficulties e.g. speakers of languages other than English, remote communities and those with interrupted schooling).

Assessment of this unit requires access to the materials resources and equipment needed to source, organise and analyse information.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Source materials may include:

- company reports
- direct observation from the natural or built environment
- music and/or film/video
- myths and legends
- oral history
- photographs and other artworks
- promotional material
- range of texts/text types
- technical reports/data.

Critically analysing sources and references in the context of current work may involve:

- considering how ideas may be adapted
- considering how ideas may be challenged within work
- drawing links between references and own work
- making judgements about relevance of information and ideas.

The ***concept*** may include:

- the relationship of the work to a theoretical and historical/contemporary context
- the relationship of the work to new and emerging technology and its current and potential application
- the subject matter or theme for the work, e.g. the body; identity; land and place; political, cultural or social issues; spiritual concerns.

RANGE STATEMENT

Constraints for the concept may include:

- audience
- availability of materials, tools and equipment
- budgeting
- presentation venue/context
- sponsorship
- timeframe.

Relevant individuals may include:

- art critics and writers
- mentor
- other artists
- peer group
- supervisor.

Discourse may involve:

- electronic - video conference, Internet
- forum
- use of diagrams, charts
- visual and oral presentation
- written and visual presentation.

Influences on the *development* of the concept may include:

- discussion and debate about the concept with peers/supervisor
- the conceptual development of work by other artists/designers/curators/arts administrators
- theoretical and philosophical considerations.

Problem solving strategies may include:

- further evaluation of concept against personal affinity with the idea, social conventions and or significance and aesthetic considerations
- further reflection on concept
- innovation, thinking beyond established boundaries or conventions.

Unit Sector(s)

Not Applicable

CUVCOR07B Use drawing techniques to represent the object or idea

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the skills and knowledge required to visually represent objects or ideas. At this level, drawing techniques would be basic. This is a core unit which complements all specialisation units. It is different from the drawing specialisation units which focus on drawing as an art form. This work would usually be carried out under supervision.

This is a core unit which underpins many other specialisation units.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

This unit has linkages to all the specialisation units in the Visual Arts Craft and Design Training Package and to units from other Training Packages.

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare for drawing.	1.1 Correctly identify tools and materials required for basic drawing <i>techniques</i> . 1.2 Select appropriate <i>tools and materials</i> for basic drawing techniques.
2 Use basic drawing techniques.	2.1 Apply a limited range of techniques to represent the <i>object or idea</i> . 2.2 Handle tools and materials <i>safely</i> .

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills:

- literacy skills sufficient to read product labels and instructions
- numeracy skills sufficient to deal with basic scaling and layout issues.

Required knowledge:

- general knowledge of the physical properties and capabilities of the most commonly used materials and tools for drawing
- general knowledge of different approaches to drawing and the work of other practitioners in relation to using drawing to represent an object or idea
- awareness of copyright, moral rights and intellectual property issues and legislation in relation to drawing
- overview knowledge of the elements and principles of design
- environmental and occupational health and safety issues associated with the tools and materials used in drawing work.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The following evidence is critical to the judgement of competence in this unit:

- production of more than one drawing which represents the object or idea and which shows command of the basic technique/s used.

EVIDENCE GUIDE

Context of and specific resources for assessment

The assessment context must provide for:

- practical demonstration of skills through the production of drawings.

Method of assessment

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- direct observation of work in progress
- questioning and discussion of the candidate's intentions and work
- verbal or written reports
- review of portfolios of evidence
- third party workplace reports of performance by the candidate.

Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities and people who may have literacy or numeracy difficulties e.g. speakers of languages other than English, remote communities and those with interrupted schooling).

Assessment of this unit requires access to the materials and resources needed to apply basic drawing techniques.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

The ***object or idea*** may include a:

- ceramic piece
- design solution
- developing concept
- fibre/textile work
- movement sequence/s
- mural
- piece of jewellery or other wearable object
- prop/set/costume
- room layout
- sculpture
- stage setup
- story or narrative
- technical solution.

Techniques may include:

- application of pigment
- linear marks of differing character
- linear marks to produce illusion of form in space
- simple linear perspective
- tonal ranges to produce illusion of form in space.

RANGE STATEMENT

Materials and tools may include:

- a range of graphite pencils
- a range of papers
- board
- charcoal
- colour pencils
- drafting equipment
- measuring tools
- natural ochres
- pastels and chalks
- pigments
- rags
- sticks
- wood/bark.

Safely means:

- in accordance with relevant occupational health and safety practices and legislation.

Unit Sector(s)

Not Applicable

CUVCOR08B Produce drawings to represent and communicate the concept

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the skills and knowledge required to produce drawings which represent and communicate the concept. This is a core unit which complements all the specialisation units. It is different from the drawing specialisation units which focus on drawing as an art form. This unit goes beyond the scope of CUVCOR07B Use drawing techniques to represent the object or idea in terms of the complexity of techniques and representation. This work would usually be carried out under supervision.

This is a core unit which underpins many other specialisation units.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

This unit has linkages to all specialisation units in the Visual Arts Craft and Design Training Package, and to units from other Training Packages.

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 **Prepare to use a range of drawing techniques.**

1.1 Identify suitable techniques to represent the ***concept***.

1.2 Select tools and ***materials*** required for the identified ***techniques***.

1.3 Consider ***presentation context*** for the drawings in selecting techniques, tools and materials.

2 **Produce drawings.**

2.1 Apply a range of techniques to explore ways of representing the concept.

2.2 Assess techniques and select those which best suit representation of the concept.

2.3 Draw the concept using selected techniques.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills:

- literacy skills sufficient to read product labels and instructions
- numeracy skills sufficient to deal with basic scaling and layout issues.

Required knowledge:

- general knowledge of the physical properties and capabilities of a range of commonly used drawing tools and materials
- general knowledge of different approaches to drawing and how other practitioners use drawing to represent the concept
- awareness of copyright, moral rights and intellectual property issues and legislation in relation to drawing
- overview knowledge of the elements and principles of design
- environmental and occupational health and safety issues associated with the tools and materials used for drawing.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The following evidence is critical to the judgement of competence in this unit:

- production of more than one drawing which demonstrate a command of the techniques and are appropriate for the presentation context.

EVIDENCE GUIDE

Context of and specific resources for assessment

The assessment context must provide for:

- practical demonstration of skills using a range of tools and materials to produce drawings which represent and communicate the concept.

Method of assessment

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- direct observation of work in progress
- evaluation of drawings
- questioning and discussion of candidate's intentions and work
- verbal or written reports
- review of portfolios of evidence
- third party workplace reports of performance by the candidate.

Assessment of this unit requires access to the materials, resources and equipment needed to apply a number of drawing techniques.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

The ***concept*** may relate to an object or idea and may include:

- crafted objects
- design concepts
- digital work
- installations
- movement sequence
- paintings or prints
- performance
- sculptures
- story, narrative
- technical solutions for a design or work.

Techniques may include:

- digital drawing techniques
- integration of text and drawing
- linear marks of differing intensity and character
- linear marks to produce illusion of form in space
- linear perspective
- scaling techniques
- tonal range to produce illusion of form in space
- use of positive/negative space.

RANGE STATEMENT

Materials may include:

- a range of graphite pencils
- a range of papers
- bark/wood
- boards
- charcoal
- colour pencils
- crayons
- inks
- natural ochres
- pastels and chalks
- pigments
- solvents
- watercolour.

The *presentation context* may include:

- design proposal
- proposal for product or work development
- proposals in response to a brief
- visualisation of a concept.

Equipment may include:

- blades
- brushes
- digital technology
- drawing and design applications
- measuring tools
- printer
- rags
- scanner
- sponges
- sticks.

Unit Sector(s)

Not Applicable

CUVCOR09B Select and apply drawing techniques and media to represent and communicate the concept

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the skills and knowledge required to develop drawings which represent and communicate the concept. This is a core unit which complements all the specialisation units. It is different from the drawing specialisation units which focus on drawing as an art form. This unit goes beyond the scope of CUVCOR07B Use drawing techniques to represent the object or idea and CUVCOR08B Produce drawings to represent and communicate the concept in terms of the complexity of skill requirement, use of techniques and sophistication of representation. This work would usually be carried out under supervision.

This is a core unit which underpins many other specialisation units.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

This unit has linkages to all the specialisation units in the Visual Arts Craft and Design Training Package, and to units from other Training Packages.

Employability Skills Information

Employability skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- 1 **Research suitable drawing techniques for representing the concept.**

- 1.1 Identify appropriate ***sources of information*** relating to a range of ***techniques*** and ***materials*** and their application to the communication of a ***concept***.
- 1.2 Systematically gather and organise the information.
- 1.3 Evaluate information in terms of the application of techniques and materials to the concept.
- 1.4 Select a range of possible techniques taking into account communication of the concept and the ***presentation context***.

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|--|
| <p>2 Determine purpose for drawings.</p> | <p>2.1 Identify purpose, scope and presentation context of <i>drawing</i> requirements.</p> <p>2.2 Identify any technical requirements or specifications.</p> <p>2.3 Select a range of possible techniques taking into account communication of the concept and the presentation context.</p> |
| <p>3 Explore drawing techniques and produce drawings.</p> | <p>3.1 Select appropriate materials and tools for drawing.</p> <p>3.2 Draw the concept using the range of selected techniques.</p> <p>3.3 Evaluate suitability of each technique in terms of its success in communicating the concept within the presentation context.</p> <p>3.4 Select the drawing/s which best communicate/s the concept within the presentation context.</p> <p>3.5 Prepare drawing/s for the identified presentation context.</p> |

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills:

- literacy skills sufficient to read product safety labels and instructions and to prepare drawings for presentation
- numeracy skills sufficient to determine layout issues and to deal with scaling.

Required knowledge:

- physical properties and capabilities of a wide range of materials and tools used in drawing
- general knowledge of the elements and principles of design and their specific application to drawing
- general knowledge of different approaches to drawing and how other practitioners use drawing to represent the concept
- awareness of copyright, moral rights and intellectual property issues and legislation in relation to drawing
- environmental and occupational health and safety issues associated with the tools and materials used for drawing.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The following evidence is critical to the judgement of competence in this unit:

- production of a series of drawings which demonstrate a command of the selected techniques and which successfully communicate the concept.

EVIDENCE GUIDE

Context of and specific resources for assessment

The assessment context must provide for:

- practical demonstration of skills using selected tools and materials to produce and present drawings which represent and communicate the concept.

Method of assessment

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- direct observation of the production of drawings
- evaluation of drawings
- questioning and discussion about candidate's intentions and the work outcome
- verbal or written reports
- review of portfolios of evidence
- third party workplace reports of performances by the candidate.

Assessment of this unit requires access to the materials, resources and equipment needed to apply drawing techniques to represent and communicate the concept.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

The ***concept*** may relate to an object or idea and may include:

- crafted objects
- design concepts
- digital work
- installations
- movement sequence
- paintings or prints
- performance
- sculptures
- story, narrative
- technical solutions for a work or design.

Sources of information may be:

- catalogues
- colour charts and boards
- nature
- stories or narratives
- technical texts
- the work of other artists and designers.

Techniques may include:

- digital drawing techniques
- integration of text and drawing
- linear marks of differing intensity and character
- linear marks to produce illusion of form in space
- linear perspective
- positive/negative space
- scaling techniques
- tonal range to produce illusion of form in space
- washes.

RANGE STATEMENT

Materials may include:

- a range of graphite pencils
- a range of papers
- bark/wood
- boards
- charcoal
- colour pencils
- crayons
- inks
- natural ochres
- pastels and chalks
- pigments
- solvents
- watercolour.

The *presentation context* may include:

- exhibition proposals
- grant applications
- projections
- proposals for product development
- proposals in response to a brief
- publications
- visualisation of a object, product or idea.

Preparing *drawings* for presentation may involve:

- adding captions, text to drawings
- cleaning drawings
- mounting drawings
- preparing drawings for printing/reproducing
- scanning drawings and preparing them for electronic storage or transmissions.

The purpose and scope of the *drawings*:

- relate to their presentation context.

RANGE STATEMENT

Equipment may include:

- air brush
- blades
- brushes
- computer
- digital camera
- drawing and design applications
- printer
- rags
- scanner
- sponges
- sticks.

Unit Sector(s)

Not Applicable

CUVCRS03B Produce computer-aided drawings

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the skills and knowledge required to use a range of CADD program functions and features to produce drawings. People working in many industries require the skills and knowledge in this unit, and the unit is written to allow for contextualisation to a particular industry context. Within the cultural industries this unit is relevant for people working across multiple sectors. The focus of this unit is on the technical skills required to operate CADD, and design skills are found in other units within the Visual Arts Craft and Design Training Package.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

This unit has linkages to a wide range of other units in various Training Packages and combined assessment and/or training with those units would be appropriate.

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|--|
| 1 Determine drawing requirements. | 1.1 Review relevant documentation/concept <i>information</i> to determine requirements and processes based on project objectives and parameters.
1.2 Liaise with relevant colleagues to confirm and clarify requirements. |
| 2 Select and set up CADD package. | 2.1 Correctly identify required hardware, software, tools and equipment for the specific project.
2.2 Correctly set up hardware and software in accordance with operating instructions and organisational procedures.
2.3 Identify and retrieve digitised information relevant to the project. |

ELEMENT	PERFORMANCE CRITERIA
3 Gather object parameters and/or measurements.	3.1 Accurately establish and record critical dimensions and data for the required <i>design</i> . 3.2 Correctly identify the requirements in relation to accuracy, tolerances and other critical information.
4 Prepare plots or drawings.	4.1 Correctly access and use <i>CADD functions and features</i> in accordance with operating instructions. 4.2 Correctly access and use <i>peripheral equipment</i> required for the project. 4.3 Prepare and review preliminary drawings in consultation with relevant colleagues.
5 Check drawings and save files.	5.1 Check designs against the project objectives and specifications in accordance with organisational procedures. 5.2 Identify and make required adjustments to designs based on review and consultation with relevant colleagues. 5.3 Store data files in accordance with operating instructions and organisational procedures.

Required Skills and Knowledge

Required Skills and knowledge

This section describes the skills and knowledge required for this unit.

Required skills:

- literacy skills sufficient to interpret and use digital information, including instructions required for the production of computer aided drawings
- numeracy skills sufficient for calculations and measurements required for the production of computer aided drawings.

Required knowledge:

- the ways in which CADD is used within a specific industry context
- basic principles of CADD
- typical features and functions of CADD programs, including drawing tools, view displays, edit functions, working with layers, plotting and printing
- occupational health and safety issues associated with the use of hardware and software
- awareness of copyright, moral rights and intellectual property issues and legislation associated with the use of CADD.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The following evidence is critical to the judgement of competence in this unit:

- ability to use the standard features and functions of a CADD program to produce drawings
- knowledge of CADD capabilities and uses in relation to the specific industry context.

EVIDENCE GUIDE

Context of and specific resources for assessment

The assessment context must provide for:

- practical demonstration of skills using an industry-current CADD program to develop drawings for a specific workplace purpose.

Method of assessment

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- evaluation of drawings produced by the candidate
- oral or written questioning to assess knowledge of CADD features and functions
- review of portfolios of evidence
- third party workplace reports of performance by the candidate.

Assessment methods should closely reflect workplace demands and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties e.g. speakers of languages other than English, remote communities and those with interrupted schooling).

Assessment of this unit requires access to the materials resources and equipment needed to produce computer-aided drawings.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Information required for the project may include:

- creative objectives
- measurements/dimensions, e.g. objects, space
- relevant statutory requirements, e.g. safety
- scope for making adjustments
- technical objectives.

Computer-aided ***designs*** may be required for a large range of work situations and may include:

- costume/fashion designs
- lighting plots
- object or product design
- room/site/stage layouts
- stage and set design
- visual art works and/or projects, e.g. community installations, public art, performance.

CADD functions and features to be used must include:

- drawing tools (methods for drawing lines, arcs, polylines, texts, dimensions)
- edit functions
- plotting and printing
- view displays
- working with layers.

CADD functions and feature to be used may include:

- 3D techniques, e.g. entering coordinates, displaying 3D views
- how CADD works in an integrated environment
- isometrics and perspectives
- macros
- use of attributes to make project reports.

RANGE STATEMENT

Peripheral equipment required for the project may include:

- plotters
- printers
- scanners.

Unit Sector(s)

Not Applicable

CUVCRS04B Produce technical drawings

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the skills and knowledge required to develop and refine a range of techniques to produce technical drawings. It outlines the ways technical drawing can be applied to a range of contexts where visual representation is required. People working in many industries require the skills and knowledge in this unit, and the unit is written to allow for contextualisation to a particular industry context. This work would usually be carried out independently, although guidance would be available if required.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

This unit has linkages to a wide range of other units in various Training Packages and combined assessment and/or training would be appropriate.

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 **Determine technical drawing requirements.**

1.1 Review relevant documentation/concept information to determine ***technical drawing*** requirements.

1.2 Where appropriate, liaise with relevant colleagues to confirm and clarify technical drawing requirements.

2 **Select techniques.**

2.1 Identify and select appropriate ***materials, tools*** and ***equipment*** suitable for technical drawing.

2.2 Safely follow procedures to ***test*** and practise a range of technical drawing ***techniques***.

ELEMENT	PERFORMANCE CRITERIA
3 Produce technical drawings.	3.1 Select the most appropriate technical drawing technique for the work to be produced. 3.2 Select the materials, tools and equipment appropriate to the technique. 3.3 Use technical drawing techniques correctly to production drawings which are consistent with <i>concept</i> /purpose of the drawing.

Required Skills and Knowledge

Required Skills and knowledge

This section describes the skills and knowledge required for this unit.

Required skills:

- literacy skills sufficient to interpret material required to produce technical drawings
- numeracy skills sufficient for calculations and measurements required to produce technical drawings.

Required knowledge:

- physical properties and capabilities of the range of materials, tools and equipment used for technical drawing work
- knowledge about technical drawing techniques and their application to a range of contexts and subject matter
- technical drawing practices, their history and theory
- awareness of copyright, moral rights and intellectual property issues and legislation
- organisational and legislative occupational health and safety procedures in relation to technical drawing work.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The following evidence is critical to the judgement of competence in this unit:

- production of technical drawings which show a command of the selected techniques and meet the required purpose/objectives
- knowledge of technical drawing techniques and their application to specific contexts.

EVIDENCE GUIDE

Context of and specific resources for assessment

The assessment context must provide for:

- practical demonstration of skills using required materials, tools and equipment to produce technical drawings consistent with the concept/work requirements.

Method of assessment

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- direct observation of the drawing in progress
- evaluation of technical drawings produced by the candidate
- questioning and discussion of the candidate's intentions and work outcome
- review of portfolios of evidence
- third party workplace reports of performance by the candidate.

Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English, remote communities and those with interrupted schooling).

Assessment of this unit requires access to the materials, resources and equipment needed to produce technical drawings.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Technical drawings may be:

- circuits
- diagrams
- elevations
- flow charts
- illustrations
- plans
- sections
- sketches.

Materials may include:

- acetate sheets
- chalks
- drafting film
- erasers
- inks and wet mediums
- markers
- paper
- pencils
- pens
- tape.

RANGE STATEMENT

Tools and *equipment* may include:

- computer, software applications
- cutting knives, scissors
- drafting instruments
- drafting table
- light box
- photo copier
- plotter
- printer
- rulers
- scanner
- templates.

Testing processes may involve:

- exploring techniques and materials by making practice pieces, test pieces or samples.

Techniques may include:

- computer-aided drawing
- drafting using drafting instruments
- drawing orthogonal projection
- drawing to represent scale, perspective, dimension, volume
- freehand drawing
- geometric drawing
- lettering
- rendering.

The *concept* for the technical drawing may encompass:

- aesthetic considerations
- choice of technique and materials
- presentation context.

RANGE STATEMENT

The subject matter or object to be represented may include:

- architectural structure
- electronics
- furniture
- landscape scheme
- lighting and sound set ups
- mechanics
- objects and products
- theatre, film props
- theatre, film set.

Particular safety or environmental issues may include:

- Federal, State and Territory legislation, regulations and standards
- personal protection.

Unit Sector(s)

Not Applicable

CUVDES01A Apply colour theory in response to a brief

Modification History

Not applicable.

Unit Descriptor

This unit describes the skills and knowledge required to explore and apply colour theory in response to a brief. This is a core unit in design fundamentals and as such underpins many other specialisation units. People working in many industries require the skills and knowledge in this unit, and the unit is written to allow for contextualisation to a particular industry context.

This unit describes the skills and knowledge required to explore and apply colour theory in response to a brief. This is a core unit in design fundamentals and as such underpins many other specialisation units. People working in many industries require the skills and knowledge in this unit, and the unit is written to allow for contextualisation to a particular industry context.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Examine information on colour theory	<ul style="list-style-type: none">1.1 Identify and access sources of information on colour theory relevant to the brief1.2 Use knowledge of colour theory to inform work as required by the brief
2 Apply colour theories to produce samples	<ul style="list-style-type: none">2.1 Select materials, tools and equipment required for the production of colour theory samples2.2 Follow appropriate and safe procedures to apply instances of colour theory2.3 Consider outcomes in relation to colour theory and the requirements of the brief, and make adjustments accordingly2.4 Produce a range of samples which demonstrate the appropriate application of colour theory to a brief2.5 Present and store work in a format which takes account of the need for professional presentation and potential need for the samples in future work

Required Skills and Knowledge

Not applicable.

Evidence Guide

Underpinning skills and knowledge

Assessment must include evidence of the following knowledge and skills:

general knowledge of the role and nature of a brief within the design process, including different types of brief and how designers use them

awareness of the notion of individual interpretation and choice within the design process, and the potential limitations of theory

knowledge about the materials, tools and equipment required to apply colour theory

workspace organisation and maintenance including environmental and safety issues

colour attributes and colour relationships

knowledge about how other artists and designers use colour in their work

awareness of different colour theories and their applications to different contexts

awareness of emotional, cultural and situational aspects of colour

copyright, moral rights and intellectual property issues and legislation and their impact on aspects of design

literacy skills sufficient to interpret a brief

numeracy skills sufficient to calculate quantities and proportions and to determine layout issues.

Linkages to other units

This unit underpins many specialisation units, both within the Visual Arts Craft and Design Training Package, and other Training Packages, e.g. Entertainment. It is highly recommended that this unit be assessed in conjunction with those units.

Critical aspects of evidence

The following evidence is critical to the judgement of competence in this unit:

production of a range of samples which apply colour theory in accordance with the requirements of the brief

fundamental understanding of colour theory.

Method and context of assessment

The assessment context must provide for:

project or work activities that allow the candidate to access and apply colour theory knowledge to a specific context.

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

evaluation of samples

questioning and discussion

review of portfolios of evidence

third party workplace reports of performance by the candidate.

Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English, remote communities and those with interrupted schooling).

Resource requirements

Assessment of this unit requires access to the materials resources and equipment needed to apply colour theory to a brief.

Key competencies in this unit

Key competencies are built into all workplace competencies. The table below describes those applicable to this unit. Trainers and assessors should ensure that they are addressed in training and assessment.

Level 1 = Perform

Level 2 = Administer and Manage

Level 3 = Design and Evaluate

Collecting, organising and analysing information (2)

Identifying and accessing sources of information on colour theory.

Communicating ideas and information (2)

Producing a range of samples which apply colour theory.

Planning and organising activities (1)

Following procedures to apply colour theory.

Working with others and in teams (1)

Discussing work with colleagues.

Using mathematical ideas and techniques (1)

Working out proportions for colour mixing.

Solving problems (1)

Working out colour schemes.

Using technology (1)

Using tools and equipment.

Underpinning skills and knowledge

Assessment must include evidence of the following knowledge and skills:

general knowledge of the role and nature of a brief within the design process, including different types of brief and how designers use them

awareness of the notion of individual interpretation and choice within the design process, and the potential limitations of theory

knowledge about the materials, tools and equipment required to apply colour theory

workspace organisation and maintenance including environmental and safety issues

colour attributes and colour relationships

knowledge about how other artists and designers use colour in their work

awareness of different colour theories and their applications to different contexts

awareness of emotional, cultural and situational aspects of colour

copyright, moral rights and intellectual property issues and legislation and their impact on aspects of design

literacy skills sufficient to interpret a brief

numeracy skills sufficient to calculate quantities and proportions and to determine layout issues.

Linkages to other units

This unit underpins many specialisation units, both within the Visual Arts Craft and Design Training Package, and other Training Packages, e.g. Entertainment. It is highly recommended that this unit be assessed in conjunction with those units.

Critical aspects of evidence

The following evidence is critical to the judgement of competence in this unit:

production of a range of samples which apply colour theory in accordance with the requirements of the brief

fundamental understanding of colour theory.

Method and context of assessment

The assessment context must provide for:

project or work activities that allow the candidate to access and apply colour theory knowledge to a specific context.

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

evaluation of samples

questioning and discussion

review of portfolios of evidence

third party workplace reports of performance by the candidate.

Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English, remote communities and those with interrupted schooling).

Resource requirements

Assessment of this unit requires access to the materials resources and equipment needed to apply colour theory to a brief.

Key competencies in this unit

Key competencies are built into all workplace competencies. The table below describes those applicable to this unit. Trainers and assessors should ensure that they are addressed in training and assessment.

Level 1 = Perform

Level 2 = Administer and Manage

Level 3 = Design and Evaluate

Collecting, organising and analysing information (2)

Identifying and accessing sources of information on colour theory.

Communicating ideas and information (2)

Producing a range of samples which apply colour theory.

Planning and organising activities (1)

Following procedures to apply colour theory.

Working with others and in teams (1)

Discussing work with colleagues.

Using mathematical ideas and techniques (1)

Working out proportions for colour mixing.

Solving problems (1)

Working out colour schemes.

Using technology (1)

Using tools and equipment.

Range Statement

The following explanations identify how this unit may be applied in different workplaces, sectors and circumstances.

The brief:

describes and specifies the work to be completed

is usually prepared by commissioning body or organisation (could be supervisor, client, community organisation)

may be written, diagrammatic, visual, verbal.

Sources of information on colour theory may include:

books and magazines

art and design work

scientific texts

anecdotal sources, personal observation

characteristics of materials, e.g. paints, pigments.

Materials may include:

a range of papers

cardboard

gouache, watercolour, acrylic

pastels, colour pencils, crayons

glue

lighting materials.

Tools and equipment may include:

a range of brushes

receptacles

spray gun

air brushes

sponges

rulers

measuring tools

digital equipment

software

light sources/equipment.

Colour theory samples may be exercises in response to a brief and may involve:

colour grading

colour scales

colour attributes in hue, chroma, value

effective colour relationships, e.g. harmonies and discords

colour schemes

colour models (emotional, physical and psychological effects of colour)

the application of light, e.g. in a theatrical context.

Colour samples may be:

colour wheels

colour swatches

sample boards

photographs

digital output

transitory, e.g. natural and artificial lighting effects

drawn, painted, printed.

Producing samples may also involve the application of colour theory to a work in progress. Safe procedures are in accordance with Federal, State and Territory legislation, regulations and standards.

The following explanations identify how this unit may be applied in different workplaces, sectors and circumstances.

The brief:

describes and specifies the work to be completed

is usually prepared by commissioning body or organisation (could be supervisor, client, community organisation)

may be written, diagrammatic, visual, verbal.

Sources of information on colour theory may include:

books and magazines

art and design work

scientific texts

anecdotal sources, personal observation

characteristics of materials, e.g. paints, pigments.

Materials may include:

a range of papers

cardboard

gouache, watercolour, acrylic

pastels, colour pencils, crayons

glue

lighting materials.

Tools and equipment may include:

a range of brushes

receptacles

spray gun

air brushes

sponges

rulers

measuring tools

digital equipment

software

light sources/equipment.

Colour theory samples may be exercises in response to a brief and may involve:

colour grading

colour scales

colour attributes in hue, chroma, value

effective colour relationships, e.g. harmonies and discords

colour schemes

colour models (emotional, physical and psychological effects of colour)

the application of light, e.g. in a theatrical context.

Colour samples may be:

colour wheels

colour swatches

sample boards

photographs

digital output

transitory, e.g. natural and artificial lighting effects

drawn, painted, printed.

Producing samples may also involve the application of colour theory to a work in progress.

Safe procedures are in accordance with Federal, State and Territory legislation, regulations and standards.

Unit Sector(s)

Not applicable.

CUVDSP07B Research and apply techniques for graphic design

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the skills and knowledge required to research and apply techniques for application to graphic design. The focus of the unit is on a general knowledge of graphic design techniques and the practical application of those techniques. This is a specialisation unit and refers to a specific design form. This work requires some guidance.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

It is highly recommended that this unit be assessed with or after the following units:

- CUVDES05B Interpret and respond to a brief
- Core Design
- At least one of the drawing units relating to the representation of the concept.

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 **Interpret the graphic design brief.**

1.1 Correctly interpret the specifications of ***the brief***.

1.2 Determine the user or client for the ***graphic design*** to inform design decisions.

1.3 Clarify ***specifications, parameters or constraints*** of the brief in consultation with relevant colleagues.

1.4 Source and evaluate ***information pertinent*** to the brief.

2 **Organise resources for graphic design.**

2.1 Correctly identify the resources required for the graphic design, including ***work space, materials, tools and equipment***.

2.2 Prepare and care for resources in accordance with ***safety requirements*** and organisational requirements.

2.3 Follow storage and inventory procedures in accordance with organisational procedures.

ELEMENT**PERFORMANCE CRITERIA****3 Test design approaches for graphic design.**

- 3.1 Produce a preliminary visual representation of the brief.
- 3.2 Identify possible approaches to the design and establish *criteria for the selection* of the final *approach*.
- 3.3 Select appropriate materials, tools and equipment for the testing of approaches and techniques.
- 3.4 *Test and experiment* with a range of *techniques* and materials which might meet the requirements of the brief.
- 3.5 Evaluate testing processes against selection criteria and select the preferred approach based on the requirements of the brief.
- 3.6 *Refine* and accurately *document* the design approach based on testing processes.

4 Produce the graphic design.

- 4.1 Select and organise materials, tools and techniques for the graphic design in accordance with the design approach.
- 4.2 Produce the graphic design ensuring consistency with the selected approach and the brief.
- 4.3 Present the work in accordance with the brief specifications.

Required Skills and Knowledge

Required Skills and knowledge

This section describes the skills and knowledge required for this unit.

Required skills:

- literacy skills sufficient to interpret a brief and communicate design ideas
- numeracy skills sufficient to deal with cost, layout, resolution issues, timetabling issues.

Required knowledge:

- work and ideas of other designers
- formal elements and principles of design in relation to graphic design
- techniques, materials, tools and equipment and their application to graphic design
- types of graphic design briefs
- history and theory of design in relation to graphic design
- copyright, moral rights and intellectual property issues and legislation and their relevance to graphic design.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The following evidence is critical to the judgement of competence in this unit:

- production of graphic design work demonstrating the application of selected techniques and consistency with the requirements of the brief.

EVIDENCE GUIDE

Context of and specific resources for assessment

The assessment context must provide for:

- practical demonstration of skills through the production of a graphic design which meets the requirements of a brief.

Method of assessment

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- evaluation of graphic designs produced by the candidate
- questioning and discussion
- review of portfolios of evidence
- third party workplace reports of performance by the candidate.

Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English, remote communities and those with interrupted schooling).

Assessment of this unit requires access to the materials, resources and equipment needed to safely produce graphic design work.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

The brief:

- describes and specifies the work to be completed
- is usually prepared by the commissioning body or organisation, e.g. supervisor, client, community organisation
- may be written, diagrammatic, visual, verbal.

The ***graphic design*** work may be:

- advertising
- annual reports
- banners
- book design
- corporate presentations
- corporate stationery
- invitation
- logos
- posters
- visual merchandising
- web design.

Specifications would be articulated in the brief and may refer to:

- audience
- medium
- purpose
- style.

RANGE STATEMENT

Parameters or constraints may refer to:

- cost
- legal, contractual, ethical and copyright considerations
- material characteristics
- quantity
- technology
- time frame.

Information pertinent to the brief may be about:

- client's organisational background
- health and safety considerations
- legal, contractual, ethical and copyright considerations
- product characteristics and statistics
- style considerations
- subject matter.

Work space needs may include:

- drafting table
- electronic equipment
- lighting and power requirements
- process-specific needs.

Materials may include:

- drawing implements
- inks
- range of papers of differing weights and textures
- wet mediums
- wood, board, fabrics, perspex, metal surfaces.

RANGE STATEMENT

Tools and equipment may include:

- a range of brushes
- air brush
- appropriate software, e.g. Adobe Photoshop, Illustrator, CAD, Quark Express, Powerpoint
- brushes
- computer
- digital camera
- drafting table and equipment
- hand tools
- light box
- nibs and pens
- printer
- projection equipment and screens
- scanner
- scrapers
- spatulas
- sponges
- spray cans
- spray gun
- storage devices.

Safety requirements are in accordance with:

- Federal, State and Territory legislation, regulation and standards.

Preliminary visual representation may involve:

- computer-aided drawing
- sketching
- technical drawing.

Criteria for the selection of the approach may include:

- access to materials, tools and equipment required for the production of the graphic design
- access to specialist support services
- consistency with the brief for the graphic design
- ease of application
- personal affinity with medium and materials.

RANGE STATEMENT

The *approach* may encompass:

- aesthetic considerations
- choice of medium and materials
- design solutions
- the parameters of the brief.

Testing and experimenting may involve:

- exploring techniques by making practice pieces, test pieces, mock-ups or samples
- testing materials and their application.

Techniques may include:

- digital imaging
- hand building (displays, installations, mock-ups)
- hand drawn illustration, lettering
- preparing work for printing processes.

Refining the approach may involve:

- adjustment to consideration of elements and principles of design
- adjustment to content
- adjustment to utilise the extended capabilities of the technique
- no change.

Documenting the approach may involve:

- final drawings, plans,
- illustrations, photographs
- written rationale or description.

Unit Sector(s)

Not Applicable

CUVDSP11B Research and apply techniques for illustrative work

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the skills and knowledge required to research and apply techniques for application to any type of illustrative work. Within this unit, illustrative work would generally be quite simple in nature. The focus of the unit is on a general, introductory knowledge of illustrative work and its practical application. This is a specialisation unit and refers to a specific design form. This work requires some guidance.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

It is highly recommended that this unit be assessed in conjunction with:

- CUVDES05B Interpret and respond to a brief
- Core Design
- At least one of the drawing units relating to the representation of the concept.

There is also a strong link between this unit and the following unit:

- CUVCRS04B Produce technical drawings.

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 **Interpret the brief for the illustrative work.**

- 1.1 Correctly interpret the specifications of ***the brief***.
- 1.2 Determine the user or client for the ***illustrative work*** to inform design decisions.
- 1.3 Clarify ***specifications, parameters or constraints*** of the brief in consultation with relevant colleagues.
- 1.4 Source and evaluate ***information pertinent*** to the brief.

2 **Organise resources for illustrative work.**

- 2.1 Correctly identify the resources required for the development of illustrative work, including ***work space, materials, tools and equipment***.
- 2.2 Prepare and care for resources in accordance with ***safety requirements*** and organisational requirements.
- 2.3 Follow storage and inventory procedures in accordance with organisational procedures.

ELEMENT	PERFORMANCE CRITERIA
3 Test design approaches for illustrative work.	<p>3.1 Produce a preliminary visual representation of the brief.</p> <p>3.2 Identify possible approaches to the work and establish <i>criteria for the selection</i> of the final approach.</p> <p>3.3 Select appropriate materials, tools and equipment for the testing of approaches and <i>techniques</i>.</p> <p>3.4 <i>Test and experiment</i> with a range of techniques and materials which might meet the requirements of the brief.</p> <p>3.5 Evaluate testing processes against selection criteria and select the preferred <i>approach</i> based on the requirements of the brief.</p> <p>3.6 <i>Refine</i> and accurately <i>document</i> approach to the illustrative work based on testing processes.</p>
4 Produce the illustrative work.	<p>4.1 Select and organise materials, tools and techniques for the production of the illustrative work in accordance with the preferred approach.</p> <p>4.2 Develop the illustrative work ensuring consistency with the selected approach and the brief.</p> <p>4.3 Present the illustrative work in accordance with the brief specifications.</p>

Required Skills and Knowledge

Required Skills and knowledge

This section describes the skills and knowledge required for this unit.

Required skills:

- literacy skills sufficient to interpret a brief and to communicate ideas for illustrative work
- numeracy skills sufficient to calculate quantities, costs, layout issues.

Required knowledge:

- techniques, materials, tools and equipment and their application to illustrative work
- types of briefs for illustrative work
- formal elements and principles of design in relation to illustrative work
- general knowledge about illustrators, their ideas, techniques and work
- history and theory of design in relation to illustrative work
- copyright, moral rights and intellectual property issues and legislation and their relevance to illustrative work.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The following evidence is critical to the judgement of competence in this unit:

- production of illustrative work which demonstrates the application of selected techniques and which is consistent with the requirements of the brief.

EVIDENCE GUIDE

Context of and specific resources for assessment

The assessment context must provide for:

- practical demonstration of skills through the production of illustrative work to meet the requirements of a brief.

Method of assessment

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- evaluation of illustrative work produced by the candidate
- questioning and discussion
- review of portfolios of evidence
- third party workplace reports of performance by the candidate.

Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English, remote communities and those with interrupted schooling).

Assessment of this unit requires access to the materials, resources and equipment needed to safely produce illustrative work.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

The brief:

- describes and specifies the work to be completed
- is usually prepared by commissioning body or organisation, e.g. supervisor, client, community organisation
- may be written, diagrammatic, visual, verbal.

Illustrative work may be for:

- advertisement
- architectural illustration
- book cover
- caricature, cartoon
- illustration for urban planning
- poster
- story board for animation
- story book, children's book
- technical, anatomical, botanical illustration.

Specifications would be articulated in the brief and may refer to:

- audience
- medium
- purpose
- style.

RANGE STATEMENT

Parameters or constraints may refer to:

- cost
- finished art requirement
- legal, contractual, ethical and copyright considerations
- material characteristics
- quantity
- technology
- time frame.

Information pertinent to the brief may be about:

- client's organisational background
- health and safety considerations
- legal, contractual, ethical and copyright considerations
- product characteristics and statistics
- style considerations
- subject matter.

Work space needs may include:

- drafting table
- electronic equipment
- lighting and power requirements
- process-specific needs.

Materials may include:

- found surfaces
- glues
- inks
- marker pens
- pastels, crayons
- pencils, graphite, charcoal
- range of papers of different weights and textures
- vellum
- water based and oil based paints and mediums
- wood, board, canvas, fabrics.

RANGE STATEMENT

Tools and equipment may include:

- a range of brushes
- air brush
- computer and software applications for illustration
- digital camera
- photocopier (black and white and colour)
- printer
- scanner
- self made pen from bamboo, feather (quill)
- spatulas, scrapers, sponges, sticks
- spray cans
- steel nibs in pen holders.

Safety requirements are in accordance with:

- Federal, State and Territory legislation, regulation and standards.

Preliminary visual representation may involve:

- computer-aided exploration
- sketching.

Criteria for the selection of the approach may include:

- access to materials, tools and equipment required for the production of the illustrative work
- access to specialist support services
- consistency with the brief for the illustrative work
- ease of application
- personal affinity with medium and materials.

Techniques may include:

- cartooning
- collage
- digital imaging
- drawing for animation
- lettering, calligraphy
- line drawing
- mixed media
- stencilling
- tonal drawing
- water colouring, gouache or oil painting.

RANGE STATEMENT

Testing and experimenting may involve:

- exploring techniques by making practice pieces, test pieces, mock-ups, roughs or samples
- testing materials and their application.

The *approach* may encompass:

- aesthetic considerations
- choice of medium and materials
- solutions in terms of illustration
- the parameters of the brief.

Refining the approach may involve:

- adjustment to consideration of elements and principles of design
- adjustment to content
- adjustment to utilise the extended capabilities of the technique
- no change.

Documenting the approach may involve:

- final sketches
- material samples
- photographs
- written rationale or description.

Unit Sector(s)

Not Applicable

CUVDSP15B Research and apply techniques for application to spatial design

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the skills and knowledge required to research and apply techniques for application to spatial design. As this unit is introductory in nature, the outcome is most likely to be a model or maquette for a spatial design or the construction of an aspect of the overall design. It may be the design and realisation of the complete design for a small scale project. This is a specialisation unit and refers to a specific design form. This work requires some guidance.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

It is highly recommended that this unit be assessed with or after the following units:

- CUVDES05B Interpret and respond to a brief
- CUVCRS03B Produce computer-aided drawings
- At least one of the drawing units relating to the representation of the concept
- Core Design.

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1 **Interpret the brief for the spatial design.**

- 1.1 Correctly interpret the specifications of ***the brief***.
- 1.2 Determine the user or client for the proposed ***design*** to inform design decisions.
- 1.3 Clarify ***specifications, parameters or constraints*** of the brief in consultation with relevant colleagues.
- 1.4 Source and evaluate ***information pertinent*** to the brief.

2 **Organise resources for spatial design.**

- 2.1 Correctly identify the resources required for the design, including ***work space, tools*** and ***equipment***.
- 2.2 Prepare and care for resources in accordance with ***safety requirements*** and organisational requirements.
- 2.3 Follow storage and inventory procedures in accordance with organisational procedures.

ELEMENT	PERFORMANCE CRITERIA
3 Test design approaches for spatial design.	<p>3.1 Produce a preliminary visual representation of the brief.</p> <p>3.2 <i>Identify possible approaches</i> to the design and establish <i>criteria</i> for the selection of the final <i>approach</i>.</p> <p>3.3 Select appropriate tools and equipment for the testing of approaches and <i>techniques</i>.</p> <p>3.4 Test and experiment with a range of techniques and <i>materials</i> which might meet the requirements of the brief.</p> <p>3.5 Evaluate <i>testing processes</i> against selection criteria and select the preferred approach based on the requirements of the brief.</p> <p>3.6 <i>Refine</i> and accurately <i>document</i> the design approach based on testing processes.</p>
4 Fabricate a model or aspect of the design.	<p>4.1 Evaluate the need for fabrication and the scope of work required.</p> <p>4.2 Select and organise materials, tools and techniques for fabrication in accordance with the design approach.</p> <p>4.3 Safely make the model or maquette ensuring consistency with the selected approach and the brief.</p> <p>4.4 Present the work in accordance with the brief specifications.</p>

Required Skills and Knowledge

Required Skills and knowledge

This section describes the skills and knowledge required for this unit.

Required skills:

- literacy skills sufficient to interpret a brief and to communicate design ideas
- numeracy skills sufficient to calculate quantities, costs, proportions.

Required knowledge:

- formal elements and principles of design in relation to spatial design
- techniques, materials, tools and equipment and their application to different areas of spatial design
- common formats and features of spatial design briefs
- general knowledge about other designers, their ideas, techniques and work
- history and theory of design in relation to spatial design
- copyright, moral rights and intellectual property issues and legislation and their relevance to spatial design.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit in this unit

The following evidence is critical to the judgement of competence in this unit:

- testing and use of a range of approaches and techniques for spatial design which are suited to the requirements of the brief
- knowledge of the processes and techniques used for spatial design in different contexts.

EVIDENCE GUIDE

Context of and specific resources for assessment

The assessment context must provide for:

- practical demonstration of skills through the development of a spatial design to meet the requirements of a brief.

Method of assessment

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- evaluation of visual documentation of the spatial design
- evaluation of plans/ models produced by the candidate
- questioning and discussion
- review of portfolios of evidence
- third party workplace reports of performance by the candidate.

Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English, remote communities and those with interrupted schooling).

Assessment of this unit requires access to the materials, resources and equipment needed to safely produce a spatial design or representation of a spatial design.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

The brief:

- describes and specifies the work to be completed
- is usually prepared by commissioning body or organisation, e.g. supervisor, client, community organisation
- may be written, diagrammatic, visual, verbal.

The spatial ***design*** work may include:

- exhibition design
- fit-outs for exterior spaces or environments
- foyer design
- installation for specific event
- office fit-outs
- set design.

Specifications would be articulated in the brief and may refer to:

- client needs
- dimensions
- purpose
- style.

Parameters or constraints may refer to:

- cost
- legal, contractual, ethical and copyright considerations
- material characteristics
- technology
- timeframe.

RANGE STATEMENT

- Information pertinent*** to the brief may be about:
- client's organisational background
 - health and safety considerations
 - legal, contractual, ethical and copyright considerations
 - style considerations
 - subject matter.
- Work space*** needs may include:
- drafting table
 - electronic equipment
 - lighting and power requirements
 - process-specific space needs.
- Tools and equipment*** may include:
- brushes, containers
 - camera, scanner
 - computer
 - hand tools
 - ladders
 - lighting equipment
 - power tools
 - printer
 - relevant software.
- Safety requirements*** are in accordance with:
- Federal, State and Territory legislation, regulation and standards.
- Preliminary visual representation*** may include:
- CADD
 - colour boards
 - photography/digital imaging
 - plan drawing
 - sample boards
 - sketching.

RANGE STATEMENT

Identifying possible approaches includes:

- identifying possible design solutions
- identifying possible realisation options, e.g. by means of a model, maquette, or by fabricating an aspect of the design.

Criteria may include:

- access to materials, tools and equipment required to realise the design
- consistency with the brief for the spatial design
- ease of manufacture
- personal affinity with medium and materials.

The *approach* to the brief encompasses:

- aesthetic considerations
- choice fabrication options
- design solutions
- the parameters of the brief.

Techniques would depend on design solutions and realisation options selected and may include:

- carpentry
- digital work
- glass work
- lighting
- modelling
- painting and decoration
- photography
- projection
- surface decoration
- textile/fibre work.

RANGE STATEMENT

Materials may include:

- cardboards, paper
- clays, modelling pastes
- fibres
- glass
- manufactured materials, e.g. tiles, panels, carpeting, textiles
- metals
- natural elements, e.g. water, light, wind, plants
- paints, glazes, stains
- plastics
- wood and/or wood products.

Testing processes may involve:

- exploring techniques by making practice pieces, test pieces, mock-ups or samples
- testing materials by applying stress tests, colour tests etc.

Refining the approach may include:

- adjustment to consideration of elements and principles of design
- adjustment to design solution
- adjustment to utilise the capabilities of the techniques
- no change.

Documenting the approach may involve:

- final drawings, plans, elevations
- illustrations, photographs
- models
- specifications for fabrication.

Unit Sector(s)

Not Applicable

CUVICS04B Originate and develop a concept

Modification History

Not Applicable

Unit Descriptor

<p>Unit descriptor</p>	<p>The standard describes the skills and knowledge required for working with and developing a concept to that stage where it becomes the basis of a creative and effective product, service or process. It covers both the response to a brief or the development of a self-initiated proposal. It does not describe the skills needed for presentation of the proposal which are covered by other units.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

<p>Application of the unit</p>	<p>This standard has been developed for people whose job specifically involves designing products or services, concepts or outcomes in any sector of the cultural industries. It might be used by someone designing a new event concept, a concept for public art, a new graphic design package for a hotel/resort, a concept for multi-media installation, a concept for sound sampling, a marketing campaign, a concept for new gallery space and so on.</p> <p>The standard relates to specialist positions in enterprises such as the community development office of local government organisations, design studios, event management/promotion firms, artist-run co-operatives, theatres and galleries and museums.</p> <p>Examples of how this unit works in practice can be found in the Supporting Information section of the Training Package.</p>
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Interpret the brief or clarify need or opportunity</p>	<p>1.1. The brief, need or opportunity for innovation is explored. The context for the new product or service is investigated and clarified and the audience/user is determined.</p> <p>1.2. The purpose, desired outcome or end product, broad content, style, cost, intended audience and other relevant factors of the brief, need or opportunity are clarified.</p> <p>1.3. The purpose, goals, constraints and requirements of the final product/service/process are specified.</p>
<p>2. Develop a range of creative approaches</p>	<p>2.1. A range of different, innovative and creative approaches and concepts is generated.</p> <p>2.2. Different approaches/concepts are reviewed for feasibility, innovation, creativity, and acceptability to client or audience.</p> <p>2.3. Possible constraints are identified and the approaches/concepts are checked against these to determine feasibility.</p> <p>2.4. The social, ethical and environmental impacts of the approaches/concepts are taken into consideration.</p> <p>2.5. The effects and advantages of various combinations of activities, systems, processes, staff, materials for achieving a creative, innovative and appropriate outcome are investigated.</p> <p>2.6. The concept(s) or approach(es) that achieve the required outcome in an innovative and feasible way are selected and draft proposals representing those approaches are documented in an appropriate format.</p>
<p>3. Seek opinions of colleagues and a range of creative and technical experts/specialists</p>	<p>3.1. Proposals are discussed with colleagues and specialists.</p> <p>3.2. Creative and technical aspects of the proposals are clarified and expert advice sought where required.</p> <p>3.3. Proposals are compared with best practice examples of similar products, services or processes.</p>
<p>4. Adjust and refine proposal on the basis of advice received and evaluation</p>	<p>4.1. Determine advantages and disadvantages of each approach/strategy based on criteria such as creativity, appropriateness to the user/audience, cost-effectiveness, level of risk, potential benefits and technical feasibility.</p> <p>4.2. Proposals are evaluated and the approach which will</p>

ELEMENT	PERFORMANCE CRITERIA
	result in achieving the desired outcome is selected.
5. Develop the concept to an operational level	5.1. A detailed <i>specification</i> for the product in terms of creativity, the audience/user, budget, and technical requirements is developed. 5.2. The detailed specification is presented to the relevant parties for approval, funding or endorsement.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- the ability to use creative techniques to generate a range of innovative ideas
- the ability to communicate with a wide range of people
- research skills
- relevant technical knowledge
- appropriate ways of documenting creative proposals.

Required knowledge

- knowledge of past history of work in related areas
- knowledge of the social and environmental effects of possible approaches
- specialist knowledge relating to issues within the specific work contexts within cultural industries
- technical principles and knowledge appropriate to the area covered by the concept
- communication principles
- the variety of methods and materials available.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • generation and evaluation of creative and effective concepts • translation of an original idea into a concrete proposal which is documented and reviewed using appropriate methods.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • interaction with others to reflect the collaborative nature of the development process.
Method of assessment	<p>Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:</p> <ul style="list-style-type: none"> • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate • direct observation of the candidate participating in discussions and other collaborative activities to evaluate ideas or solutions • oral or written questioning to assess knowledge of the social and environmental impacts of relevant products, services or processes.
Guidance information for assessment	<p>This competency standard could be assessed on its own or in combination with other competencies relevant to the job function within the cultural industries work context.</p> <p>The other standards would probably most appropriately be at AQF level 4 and above and may include:</p> <ul style="list-style-type: none"> • CUVADM11B Work within an arts organisation context • CUVDES04B Integrate colour theory and design processes in response to a brief • CUVCON06B Develop concepts for arts

EVIDENCE GUIDE	
	<p>organisations or projects</p> <p>Please note: the above is a generic list which may apply across the cultural industries. Some of the units may not be included in this particular Training Package.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Products might include:	<ul style="list-style-type: none"> • commissioned art work • fabric designs • furniture design • marketing campaigns • new gallery concepts • photoimaging assignments.
Purposes of the product may include:	<ul style="list-style-type: none"> • provision of services to clients within the cultural industries.
Factors to be considered may include:	<ul style="list-style-type: none"> • access to technology • audience/user characteristics • cost effectiveness • level of skill and understanding required for implementation • need for additional staff training • resource requirements • technical feasibility.
Constraints to the project may include:	<ul style="list-style-type: none"> • availability of skilled experts and personnel • cost • equipment • finance • technical difficulty

RANGE STATEMENT	
	<ul style="list-style-type: none"> time.
<p><i>Formats</i> for documentation may include:</p>	<ul style="list-style-type: none"> briefs for a consultant descriptions of a creative proposal for in-house consideration proposals to be submitted to a funding body or sponsor.
<p>Appropriate <i>colleagues and specialists</i> to discuss proposals with may include:</p>	<ul style="list-style-type: none"> any staff who may be involved in the design or the implementation of the process creative and administrative staff personnel external to the organisation technical specialists.
<p>Project <i>specifications</i> may include:</p>	<ul style="list-style-type: none"> audience budget operational plan ownership of final product purpose resources, e.g.: <ul style="list-style-type: none"> human plant and equipment time.
<p>Resources and equipment may include:</p>	<ul style="list-style-type: none"> computers, e.g.: <ul style="list-style-type: none"> hardware software specialist staff required for successful development of the proposed product or service others resources or equipment depending on the outcome required.

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Research and Innovation
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CUVVSP01B Produce calligraphy

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the skills and knowledge required to produce calligraphic work through the exploration and application of a range of techniques, tools and materials. As such the range of techniques could be quite varied and broad in nature. It is a specialisation unit and refers to a specific art form. This work would usually be carried out under limited supervision.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

It is highly recommended that this unit be assessed in conjunction with the following units:

- CUVVCR03B Develop, refine and communicate concept for own work
- CUVCOR08B Produce drawing to represent and communicate the concept
- CUVCOR12B Review history and theory for application to artistic practice.

Depending on the context, combined assessment and/or training with a range of other units would also be appropriate, e.g.:

- CUVCRS08B Document the work progress
- CUVCRS14B Prepare, store and maintain finished work.

Employability Skills Information

Employability skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare and maintain resources for calligraphic work.	1.1 Correctly identify and select <i>tools</i> and <i>materials</i> required for the production of calligraphic work. 1.2 Prepare, clean and maintain tools and materials in accordance with relevant <i>workplace procedures</i> and <i>safety requirements</i> . 1.3 <i>Organise and maintain</i> work space so that it remains clean and safe. 1.4 Store tools and materials in accordance with relevant workplace and safety requirements.
2 Explore calligraphic techniques to plan work.	2.1 Assess the <i>capabilities of techniques</i> , tools, and materials for different types of calligraphic work. 2.2 Use and/or combine different <i>techniques</i> , tools, and materials to determine and extend capabilities. 2.3 Determine the <i>conceptual vision</i> for the proposed calligraphic work based on exploration of different techniques or from supplied information. 2.4 Establish criteria for the selection of techniques to meet the conceptual vision. 2.5 Select techniques based on the conceptual vision. 2.6 Plan work, identifying work processes and resource requirements.
3 Realise the calligraphic work.	3.1 Organise the resources required for the production of the proposed calligraphic work based on the plan of work. 3.2 Safely use and adapt techniques, tools and materials appropriately to realise the conceptual vision. 3.3 Identify potential different approaches that may enhance the final work and incorporate these into the work process.

Required Skills and Knowledge

Required Skills and knowledge

This section describes the skills and knowledge required for this unit.

Required skills:

- literacy skills sufficient to read product safety labels
- numeracy skills sufficient to calculate quantities and determine layout issues.

Required knowledge:

- the physical properties and capabilities of the range of materials and tools used in calligraphic work
- work space requirements for calligraphic work, including ways of organising and maintaining space
- ways of exploring, adapting and combining techniques and materials to achieve different effects in calligraphic work
- general knowledge of the formal elements and principles of design and their specific application to the production of calligraphic work
- cleaning and maintenance techniques for tools used in calligraphic work
- general knowledge of the historical and theoretical contexts for calligraphic work
- awareness of copyright, moral rights and intellectual property issues
- environmental issues associated with the tools and materials used in calligraphic work
- organisational and legislative occupational health and safety procedures in relation to calligraphic work.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence

The following evidence is critical to the judgement of competence in this unit:

EVIDENCE GUIDE

required to demonstrate competency in this unit

- production of calligraphy which demonstrates a command of selected techniques and which is consistent with the conceptual vision
- knowledge of materials and tools and how they are used and extended in calligraphic work.

Context of and specific resources for assessment

The assessment context must provide for:

- evaluation of visual language and technical execution of work pieces produced by the candidate
- practical demonstration of skills using required tools, equipment and materials to produce multiple examples of calligraphic work or a single major work.

Method of assessment

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- evaluation of work
- direct observation of calligraphic work in progress
- questioning and discussion of the candidate's intentions
- verbal and written reports
- review of portfolios of evidence.

Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English, remote communities and those with interrupted schooling).

Assessment of this unit requires access to the materials, resources and equipment needed to apply and extend calligraphy techniques.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Tools may include:

- disposable calligraphy pens
- range of paint brushes
- self made pen from bamboo, feather (as quill), reed
- steel nibs in pen holders
- tools adapted for a specific purpose.

Materials may include:

- fabric e.g. cotton, linen or silk
- gold leaf
- gouache
- inks
- papers of differing weights and textures
- perspex, glass
- vellum
- watercolour
- wood.

Workplace procedures may relate to such things as:

- cost control
- process-specific procedures
- recycling
- reporting
- safety
- use of materials.

Safety requirements would be in accordance with:

- Federal, State and Territory legislation, regulations and standards.

RANGE STATEMENT

Organisation and maintenance of the work space may relate to:

- light
- ventilation
- wet and dry areas.

Assessing the *capabilities of the techniques*, tools and materials may involve:

- producing test pieces or samples
- systematically testing a range of processes.

Extending *capabilities of techniques* refers to:

- discovering new ways of using them
- exploring the potential of techniques.

Within this unit the candidate would generally extend, build upon and combine a range of *techniques* which may include:

- application of decoration to pen and drawn letterform
- application of pen skills for a purpose e.g. loosen up movements of the pen to make linear marks of differing intensity and character - thick sharp, thin curvilinear
- penning a range of letterforms, e.g. Roman, Uncial, Carolingian, Gothic, Italic, Foundational, Copperplate
- variation of weight and size of letterform.

The *conceptual vision* may be determined by:

- elements and principles of design
- the relationship of the work to a theoretical and historical context
- the subject matter or theme for the calligraphy, e.g. the body; identity, land and place; political, cultural, social issues; spiritual concerns.

Criteria for the selection of techniques may relate to:

- access to materials, tools and equipment for the techniques
- consistency with the conceptual vision for the proposed calligraphy
- ease of application of the techniques
- personal affinity with the techniques.

Unit Sector(s)

Not Applicable

CUVVSP02B Research and experiment with techniques to produce calligraphy

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the skills and knowledge required to research and experiment with various techniques and media for the realisation of calligraphic work. It outlines the way calligraphic works are produced through the use of experimentation and ongoing refinement. It is a specialisation unit and refers to a specific art form. This work would usually be carried out independently, although guidance would be available if required.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

It is highly recommended that this unit be assessed in conjunction with the following units:

- CUVCOR04B Originate concept for own work and conduct critical discourse
- CUVCOR09B Select and apply drawing techniques and media to represent and communicate the concept
- CUVCOR13B Research and critically analyse history and theory to inform artistic practice.

Depending on the context, combined assessment and/or training with a range of other units would also be appropriate, e.g.:

- CUVCRS14B Prepare, store and maintain finished work
- CUVCRR08B Document the work progress.

Employability Skills Information

Employability skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|--|
| 1 Inform work through experimentation with calligraphic techniques and media. | <ul style="list-style-type: none">1.1 Evaluate the potential for new approaches to calligraphic work based on <i>capabilities</i> of <i>techniques</i> already used.1.2 Select, adapt or introduce new <i>materials</i> and <i>tools</i> for the achievement of different effects.1.3 Extend the capabilities of <i>calligraphic</i> techniques through experimentation to inform practice.1.4 Take account of <i>particular safety or environmental issues</i> associated with the use of different techniques and media.1.5 <i>Research</i>, adapt and use relevant ideas and approaches from other practitioners with consideration of <i>intellectual property, moral rights and copyright requirements</i>. |
| 2 Develop and refine a conceptual vision for calligraphic work. | <ul style="list-style-type: none">2.1 Develop a <i>conceptual vision</i> for work based on knowledge and understanding of different calligraphic techniques.2.2 Consider the criteria for selecting techniques, material and tools based on results of experimentation.2.3 Establish criteria which are most likely to facilitate the achievement of the conceptual vision.2.4 Select approach to work which meets established criteria.2.5 <i>Refine the conceptual vision</i> based on ongoing experimentation and analysis of calligraphic techniques. |

ELEMENT**PERFORMANCE CRITERIA**

- 3 **Determine and organise resource requirements for new work.**
- 3.1 Assess specific resource requirements which arise from the use of techniques and experimental approaches.
 - 3.2 Research and access potential *sources of supply* for calligraphic resources.
 - 3.3 Evaluate *cost or other constraints* which may impact on the development of work.
 - 3.4 Set up or coordinate resource requirements in accordance with safety or other *workplace requirements*.
- 4 **Realise calligraphic work.**
- 4.1 Realise the calligraphic work using techniques and media selected from research and experimentation to meet the conceptual vision.
 - 4.2 Evaluate and respond to the potential for changes in the use of techniques, materials and tools.
 - 4.3 Refine the conceptual vision based on ongoing experiences with the production of work.
 - 4.4 Use safe working practices throughout the production of calligraphic work.
 - 4.5 Consider issues of presentation and take action accordingly.

Required Skills and Knowledge

Required Skills and knowledge

This section describes the skills and knowledge required for this unit.

Required skills:

- research skills and sources of information to inform experimentation in calligraphic work
- literacy skills sufficient to interpret information and material about the work of other calligraphers
- numeracy skills sufficient to evaluate resource costs and to calculate layout issues.

Required knowledge:

- the role of experimentation in developing and refining concepts for calligraphy work
- detailed knowledge of physical properties and capabilities of the range of materials and tools used in calligraphic work
- the characteristics of different materials under different treatments and the potential of these characteristics to achieve different effects
- the formal elements and principles of design and how these may be used, adapted and challenged in the development of concepts for calligraphy work
- the historical and theoretical contexts for calligraphic work and how this may be used to inform own artistic practice
- copyright, moral rights and intellectual property issues and legislation associated with calligraphic work
- sources of raw, part-processed and processed materials and other resources for calligraphic work
- work space requirements for calligraphic work including selection and set up of work space for particular types of work
- environmental issues associated with the tools and materials used in calligraphic work, including the potential issues associated with new approaches
- organisational and legislative occupational health and safety procedures in relation to calligraphic work.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The following evidence is critical to the judgement of competence in this unit:

- production of calligraphic work which demonstrates a highly developed command of the selected techniques and which is consistent with the conceptual vision
- in depth knowledge of techniques, materials and tools and the ways they may be adapted and extended.

Context of and specific resources for assessment

The assessment context must provide for:

- evaluation of visual language and technical execution of work pieces produced by the candidate
- practical demonstration of skills using required tools, equipment and materials to produce multiple examples of calligraphic work or a single major work.

Method of assessment

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- direct observation of calligraphic work in progress, including exploration of and experimentation with techniques
- evaluation of completed work
- questioning and discussion about candidate's intentions and the work outcome
- verbal and written reports
- review of portfolios of evidence.

Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English, remote communities and those with interrupted schooling).

EVIDENCE GUIDE

Assessment of this unit requires access to the materials and resources needed to apply calligraphy techniques and to extend them through exploration and experimentation.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Extending *capabilities* through

- experimentation encourages the exploration of the full potential of the art form and involves innovation.

Within this unit the candidate would generally demonstrate a command of a broad range of techniques as the basis for experimentation and innovation. *Techniques* may include:

- lettering fully integrated with decorated elements, e.g. a letter of the alphabet intertwined with illustrated plant
- letters formed with illusion of depth
- letters formed with linear perspective (vanishing points)
- overlay of text in translucent materials
- text over collaged imagery in a range of styles.

RANGE STATEMENT

Materials may include:

- fabric, e.g. cotton, linen or silk
- gesso, impasto
- gold leaf
- gouache
- inks
- papers of differing weights and textures
- perspex, glass
- vellum
- watercolour
- wood.

Tools may include:

- air brushes
- Asian brushes
- disposable calligraphy pens
- self made pen from bamboo, feather (as quill)
- steel nibs in pen holders
- tools adapted for specific purposes.

Techniques for **calligraphy** may also include extending, building upon and combining the following techniques:

- application of decoration to pen and drawn letterform
- application of pen skills for a purpose, e.g. loosen up movements of the pen to make linear marks of differing intensity and character thick sharp, thin curvilinear
- penning a range of letterforms, e.g. Roman, Uncial, Carolingian, Gothic, Italic, Foundational, Copperplate
- variation in weight and size of letterform.

Particular safety or environmental issues may include:

- Federal, State and Territory legislation, regulations and standards
- personal protection
- recycling
- safe disposal of waste.

RANGE STATEMENT

- Research*** may involve:
- approaching individuals with relevant expertise
 - attending lectures and talks
 - conducting material and technical experiments and tests
 - seeking out information in books, journals, newspapers
 - visiting exhibitions, museums.
- Intellectual property, moral rights and copyright requirements*** may relate to:
- extent to which the work may be used
 - procedures for seeking permission to use the work of others, including systems for the administration of copyright
 - protocols for the adaptation of work by others.
- The ***conceptual vision*** may be determined by:
- elements and principles of design
 - the relationship of the work to a theoretical and historical context
 - the subject matter or theme for the ceramic work, e.g. the body; identity; land and place; political, cultural, social issues; spiritual concerns.
- Refining the conceptual vision*** may include:
- adjustment to consideration of elements and principles of design
 - adjustment to subject matter or theme
 - adjustment to utilise the extended capabilities of the technique
 - no change.
- Sources of supply*** may include:
- commercial outlets
 - found objects or materials
 - manufacturing or factory waste
 - nature.
- Cost and other constraints*** may relate to:
- availability of materials and tools
 - budgeting
 - sponsorship
 - timeframe.

RANGE STATEMENT

Workplace requirements may include:

- drying space
- lighting
- ventilation
- wet and dry areas.

Issues of presentation may include:

- cost
- practical considerations
- presentation context
- timeframe.

Taking action may involve:

- deciding on presentation method
- seeking external assistance (framing, bookbinding, printing)
- selecting and preparing work for presentation.

Unit Sector(s)

Not Applicable

CUVVSP14B Apply techniques to produce drawings

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the skills and knowledge required to use techniques, materials and tools for the production of drawings. As such the unit covers general knowledge and the application of basic techniques, which would generally be nominated by the supervisor.

It is a specialisation unit and refers to a specific art form. This work would usually be carried out under supervision. It therefore differs from the units which relate to core drawing techniques for concept representation.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

It is highly recommended that this unit be assessed in conjunction with:

- CUVCOR01B Source concept for own work or
- CUVCOR02B Develop and articulate concept for own work
- CUVCOR07B Use drawing techniques to represent the object or idea or
- CUVCOR08B Produce drawings to represent and communicate the concept.

It could also be assessed in conjunction with:

- CUVCOR11B Source information on history and theory and apply to own area of work.

Depending on the context, combined assessment and/or training with a range of other units would also be appropriate, e.g.:

- CUVCRS13B Store finished work.

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare and maintain physical resources to produce drawings.	<p>1.1 Correctly identify and select <i>tools</i> and <i>materials</i> required for the production of drawings.</p> <p>1.2 Prepare, clean and maintain tools and materials in accordance with relevant <i>workplace procedures</i> and safety requirements.</p> <p>1.3 <i>Organise and maintain</i> work space so that it remains clean and safe.</p> <p>1.4 Store tools and materials in accordance with relevant workplace procedures and safety requirements.</p>
2 Use and test drawing techniques.	<p>2.1 Safely use <i>techniques</i> for the production of drawings.</p> <p>2.2 Use and <i>test</i> nominated techniques to determine the capability of the technique and its application.</p>
3 Produce the drawings.	<p>3.1 Determine <i>concept for the proposed drawings</i> based on own ideas or supplied information.</p> <p>3.2 Correctly identify the steps and resources required to produce the proposed drawings.</p> <p>3.3 Select appropriate tools and materials for the specific drawings.</p> <p>3.4 Calculate correct quantities of materials required and minimise waste where possible.</p> <p>3.5 Use techniques, tools and materials safely to produce the final drawings.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills:

- literacy skills sufficient to read product safety labels
- numeracy skills sufficient to calculate quantities.

Required knowledge:

- general knowledge of physical properties and capabilities of the most commonly used materials and tools used in drawings
- general knowledge of different styles of drawing and the work of key practitioners
- overview knowledge of the formal elements and principles of design
- introductory knowledge of the historical and theoretical contexts for drawing
- typical work space and tool requirements for the production of different types drawings
- cleaning and maintenance techniques for tools used in drawing
- awareness of copyright, moral rights and intellectual property issues
- environmental issues associated with the tools and materials used in drawing
- organisational and legislative occupational health and safety procedures in relation to drawing.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The following evidence is critical to the judgement of competence in this unit:

- production of drawings which demonstrate a command of nominated techniques and which

EVIDENCE GUIDE

reflect the concept

- general knowledge of tools and materials used in drawing.

Context of and specific resources for assessment

The assessment context must provide for:

- evaluation of visual language and technical execution of work pieces produced by the candidate
- practical demonstration of skills using required tools, equipment and materials to produce a minimum of one drawing.

Method of assessment

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- direct observation of drawings in progress
- questioning and discussion of candidate's intentions and work
- written or verbal reports
- review of portfolios of evidence
- third party workplace reports of performance by the candidate.

Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English, remote communities and those with interrupted schooling).

Assessment of this unit requires access to the materials, resources and equipment needed to produce drawings.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Tools may include:

- brushes
- digital equipment, software and printer, discs, CDs
- rags
- scrapers
- spatulas
- sponges
- sticks.

Materials for drawing may include:

- charcoal
- ink and wash
- papers
- pastels, chalks and crayons
- pencils from B-6B
- watercolour.

Workplace procedures may relate to such things as:

- cost control
- process-specific procedures
- recycling
- reporting
- safety
- use of materials.

Organisation and maintenance of the work space may relate to:

- lighting
- ventilation
- wet and dry areas
- work tables, easels.

RANGE STATEMENT

Within this unit the range of *techniques* used would generally be quite limited in nature and may include:

- digital drawing techniques
- linear marks of differing intensity and character, e.g. thick, sharp, thin, curvilinear, soft (side of pencil or crayon)
- linear marks to produce illusion of 3D form
- simple linear perspective through the use of a vanishing point
- tonal range to produce illusion of 3D form
- using mixed drawing media and a range of techniques to produce drawings.

Testing techniques may include:

- experimenting directly with work in progress
- exploring techniques by making practice pieces
- making samples applying nominated techniques.

The *concept for the proposed drawings* may be influenced by:

- elements and principles of design
- the subject matter or theme for the work, e.g. the body; identity; land and place; political, cultural, social issues; spiritual concerns.

Unit Sector(s)

Not Applicable

CUVVSP15B Produce drawings

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit describes the skills and knowledge required to produce drawings through the exploration and application of a range of techniques, tools, equipment and materials. As such the range of techniques could be quite varied and broad in nature.

It is a specialisation unit and refers to a specific art form statement. This work would usually be carried out under limited supervision. It therefore differs from the units which relate to core drawing techniques for concept representation.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units

It is highly recommended that this unit be assessed in conjunction with the following units:

- CUVCOR03B Develop, refine and communicate concept for own work
- CUVCOR08B Produce drawings to represent and communicate the concept
- CUVCOR12B Review history and theory for application to artistic practice.

Depending on the context, combined assessment and/or training with a range of other units would also be appropriate, e.g.:

- CUVCRS08B Document the work progress
- CUVCRS14B Prepare, store and maintain finished work.

Employability Skills Information

Employability skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|--|--|
| 1 Prepare and maintain resources to produce drawings. | <ul style="list-style-type: none">1.1 Correctly identify and select <i>tools</i>, and <i>materials</i> required for the production of drawings.1.2 Prepare, clean and maintain tools and materials in accordance with relevant <i>workplace procedures</i> and <i>safety requirements</i>.1.3 <i>Organise and maintain</i> work space so that it remains clean and safe.1.4 Store tools and materials in accordance with relevant workplace and safety requirements. |
| 2 Explore drawing techniques to plan work. | <ul style="list-style-type: none">2.1 <i>Assess the capabilities of techniques</i>, tools and materials for different types of drawings.2.2 Use and/or combine different <i>techniques</i>, tools and materials to determine and extend capabilities.2.3 Determine the <i>conceptual vision</i> for the proposed drawings based on exploration of different techniques or from supplied information.2.4 Establish <i>criteria for the selection of techniques</i> to meet the conceptual vision.2.5 Select techniques based on the conceptual vision.2.6 Plan work, identifying work processes and resource requirements. |
| 3 Realise drawings. | <ul style="list-style-type: none">3.1 Organise the resources required for the production of the proposed drawings based on the plan of work.3.2 Safely use and adapt techniques, tools and materials appropriately to realise the conceptual vision.3.3 Identify potential different approaches that may enhance the final work and incorporate these into the work process. |

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills:

- literacy skills sufficient to read product safety labels
- numeracy skills sufficient to calculate quantities.

Required knowledge:

- the physical properties and capabilities of the range of materials and tools used in drawing
- work space requirements for drawing, including ways of organising and maintaining space
- ways of exploring, adapting and combining techniques and materials to achieve different effects in drawing
- general knowledge of the formal elements and principles of design and their specific application to the production of drawings
- cleaning and maintenance techniques for tools used in drawing
- general knowledge of the historical and theoretical contexts for drawing
- awareness of copyright, moral rights and intellectual property issues
- environmental issues associated with the tools and materials used in drawing
- organisational and legislative occupational health and safety procedures in relation to drawing.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate

The following evidence is critical to the judgement of competence in this unit:

EVIDENCE GUIDE

competency in this unit

- production of drawings which demonstrates a command of selected techniques and which is consistent with the conceptual vision
- knowledge of materials and tools and how they are used and extended in drawing.

Context of and specific resources for assessment

The assessment context must provide for:

- evaluation of visual language and technical execution of work pieces produced by the candidate
- practical demonstration of skills using required tools, equipment and materials to produce multiple drawings or a single major work.

Method of assessment

Assessment may incorporate a range of methods to assess performance and the application of essential underpinning knowledge, and might include:

- direct observation of drawings in progress
- questioning and discussion of the candidate's intentions and work outcome
- verbal and written reports
- review of portfolios of evidence
- third party workplace reports of performance by the candidate.

Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. people with disabilities, and people who may have literacy or numeracy difficulties such as speakers of languages other than English, remote communities and those with interrupted schooling).

Assessment of this unit requires access to the materials and resources needed to produce drawings.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Tools may include:

- blades
- brushes
- computer, scanner, printer and relevant software
- discs, CDs
- rags
- scrapers
- spatulas
- sponges
- sticks.

Materials may include:

- charcoal
- graphite
- ink and wash
- pastels and chalks
- pencils from H-HB, B-9B
- range of papers of differing weights and textures
- watercolour
- wood, board, fabrics of differing weights and textures, glass, perspex or metal surfaces.

Workplace procedures may relate to such things as:

- cost control
- process-specific procedures
- recycling
- reporting
- safety
- use of materials.

RANGE STATEMENT

Safety requirements would be in accordance with:

- Federal, State and Territory legislation, regulations and standards.

Organisation and maintenance of the work space may relate to:

- lighting
- wet and dry areas
- working tables, easels.

Assessing the capabilities of the techniques, tools and materials may involve:

- experimenting directly with work in progress
- producing test pieces or samples
- systematically testing a range of processes.

Within this unit the candidate would generally extend, build upon and combine a range of ***techniques*** which may include:

- combination of erasing and layering of marks in a range of media
- digital drawing techniques
- layering of marks in a range of media
- overlapping or superimposing translucent marks over other translucent imagery
- using mixed drawing media and a range of techniques to produce drawings, e.g. 'wet' techniques over 'dry' techniques.

Techniques may also include extending and building upon the following techniques:

- linear marks of differing intensity and character, e.g. thick, sharp, thin, curvilinear, soft (side of pencil or crayon)
- linear marks to produce illusion of 3D form
- simple linear perspective through the use of a vanishing point
- tonal range to produce illusion of 3D form.

The ***conceptual vision*** may be determined by:

- elements and principles of design
- the relationship of the work to a theoretical and historical context
- the subject matter or theme for the drawings, e.g. the body; identity; land and place; political, cultural, social issues; spiritual concerns.

RANGE STATEMENT

Criteria for the selection of techniques may relate to:

- access to materials, tools and equipment for the techniques
- consistency with the conceptual vision for the proposed drawings
- ease of application of the techniques
- personal affinity with the techniques.

Unit Sector(s)

Not Applicable

HLTFA301B Apply first aid

Modification History

Unit Descriptor

This unit of competency describes the skills and knowledge required to provide first aid response, life support, management of casualty(s), the incident and other first aiders, until the arrival of medical or other assistance

Application of the Unit

These skills and knowledge may be applied in a range of situations, including community and workplace settings

Training Package users should ensure implementation is consistent with any specific workplace and/or relevant legislative requirements in relation to first aid, including State/Territory requirements for currency

Application of these skills and knowledge should be contextualised as required to address specific industry, enterprise or workplace requirements and to address specific risks and hazards and associated injuries

A current Senior First Aid, Workplace Level 2 or Level 2 qualification may provide evidence of skills and knowledge required by this competency unit. However, as with all evidence of competence, evidence must be assessed against the requirements specified in the competency unit

Licensing/Regulatory Information

Pre-Requisites

Employability Skills Information

The required outcomes described in this unit of competency contain applicable facets of Employability Skills

The Employability Skills Summary of the qualification in which this unit of competency is packaged will assist in identifying Employability Skill requirements

Elements and Performance Criteria Pre-Content

Elements define the essential outcomes of a unit of competency.

The Performance Criteria specify the level of performance required to demonstrate achievement of the Element. Terms in italics are elaborated in the Range Statement.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Assess the situation	<p>1.1 Identify assess and minimise hazards in the situation that may pose a risk of injury or illness to self and others</p> <p>1.2 Minimise immediate risk to self and casualty's health and safety by controlling any hazard in accordance with occupational health and safety requirements</p> <p>1.3 Assess casualty and identify injuries, illnesses and conditions</p>
2 Apply first aid procedures	<p>2.1 Calmly provide information to reassure casualty, adopting a communication style to match the casualty's level of consciousness</p> <p>2.2 Use available resources and equipment to make the casualty as comfortable as possible</p> <p>2.3 Respond to the casualty in a culturally aware, sensitive and respectful manner</p> <p>2.4 Determine and explain the nature of casualty's injury/condition and relevant first aid procedures to provide comfort</p> <p>2.5 Seek consent from casualty prior to applying first aid management</p> <p>2.6 Provide first aid management in accordance with established first aid principles and Australian Resuscitation Council (ARC) Guidelines and/or State/Territory regulations, legislation and policies and industry requirements</p> <p>2.7 Seek first aid assistance from others in a timely manner and as appropriate</p> <p>2.8 Correctly operate first aid equipment as required for first aid management according to manufacturer/supplier's instructions and local policies and/or procedures</p>

- 2.9 Use safe manual handling techniques as required
- 2.1 Monitor **casualty's condition** and respond in accordance with effective first aid principles and procedures
- 2.1 Finalise casualty management according to casualty's needs and first aid principles
- 3 Communicate details of the incident
 - 3.1 Request ambulance support and/or appropriate medical assistance according to relevant circumstances using relevant **communication media and equipment**
 - 3.2 Accurately convey assessment of casualty's condition and management activities to ambulance services /other emergency services/relieving personnel
 - 3.3 Prepare reports as appropriate in a timely manner, presenting all relevant facts according to established procedures
 - 3.4 Accurately record details of casualty's physical condition, changes in conditions, management and response to management in line with established procedures
 - 3.5 Maintain confidentiality of records and information in line with privacy principles and statutory and/or organisation policies
- 4 Evaluate own performance
 - 4.1 Seek feedback from **appropriate clinical expert**
 - 4.2 Recognise the possible psychological impacts on rescuers of involvement in critical incidents
 - 4.3 Participate in debriefing/evaluation as appropriate to improve future response and address individual needs

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Essential knowledge:

ARC Guidelines relating to provision of first aid as outlined

Working knowledge of:

basic principles and concepts underlying the practice of first aid

procedures for dealing with major and minor injury and illness

priorities of management in first aid when dealing with life threatening conditions

basic occupational health and safety requirements in the provision of first aid

infection control principles and procedures, including use of standard precautions

chain of survival

first Aiders' skills and limitations

Understanding of the use of an Automated External Defibrillator (AED), including when to use and when not to

First aid management of:

abdominal injuries

allergic reactions

altered and loss of consciousness

bleeding

burns - thermal, chemical, friction, electrical

cardiac arrest

casualty with no signs of life

chest pain

choking/airway obstruction

injuries: cold and crush injuries; eye and ear injuries; head, neck and spinal injuries; minor skin injuries; needle stick injuries; soft tissue injuries including sprains, strains, dislocations

envenomation - snake, spider, insect and marine bites

environmental impact such as hypothermia, hyperthermia, dehydration, heat stroke

fractures

medical conditions, including cardiac conditions, epilepsy, diabetes, asthma and other respiratory conditions

near drowning

poisoning and toxic substances (including chemical contamination)

respiratory distress

seizures

shock

stroke

substance misuse - common drugs and alcohol, including illicit drugs

Awareness of stress management techniques and available support

Social/legal issues:

duty of care

need to be culturally aware, sensitive and respectful

importance of debriefing

confidentiality

own skills and limitations

Essential skills:

Ability to:

Conduct an initial casualty assessment

Plan an appropriate first aid response in line with established first aid principles, policies and procedures, ARC Guidelines and/or State/Territory regulations, legislation and policies and industry requirements and respond appropriately to contingencies in line with own skills

Demonstrate correct procedures for performing CPR using a manikin, including standard precautions (i.e. as per unit **HLTCPR201A Perform CPR**)

Apply first aid principles

Infection control, including use of standard precautions

Follow OH&S guidelines

Demonstrate:

safe manual handling

consideration of the welfare of the casualty

ability to call an ambulance

site management to prevent further injury

Provide assistance with self-medication as per subject's own medication regime and in line with State/Territory legislation, regulations and policies and any available medical/pharmaceutical instructions

Administer medication in line with state/territory regulations, legislation and policies

Prepare a written incident report or provide information to enable preparation of an incident report

Communicate effectively and assertively in an incident

Make prompt and appropriate decisions relating to managing an incident in the workplace

Call an ambulance and/or medical assistance according to relevant circumstances and report casualty's condition

Use literacy and numeracy skills as required to read, interpret and apply guidelines and protocols

Evaluate own response and identify appropriate improvements where required

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package. The evidence guide supplements assessment requirements that apply to all units in this Training Package. Users of this evidence guide should first read the package's assessment guidelines.

Critical aspects of assessment:

Assessment must include demonstrated evidence of specified Essential Knowledge and Essential Skills identified in this competency unit

Competence should be demonstrated working individually and, where appropriate, as part of a first aid team

Consistency of performance should be demonstrated over the required range of situations relevant to the workplace or community setting

Currency of first aid knowledge and skills is to be demonstrated in line with State/Territory regulations, legislation and policies, ARC and industry guidelines

Context and resources required for assessment:

Skills in performing first aid procedures are to be assessed through demonstration, with questioning to confirm essential knowledge

For assessment purposes, demonstration of skills in CPR procedures requires using a model of the human body (resuscitation manikin) in line with Australian Resuscitation Council Guidelines

Access and equity considerations:

All workers in the health industry should be aware of access and equity issues in relation to their own area of work

All workers should develop their ability to work in a culturally diverse environment

In recognition of particular health issues facing Aboriginal and Torres Strait Islander communities, workers should be aware of cultural, historical and current issues impacting on health of Aboriginal and Torres Strait Islander people

Assessors and trainers must take into account relevant access and equity issues, in particular relating to factors impacting on health of Aboriginal and/or Torres Strait Islander clients and communities

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Contextualisation to address specific requirements may include:

Focus on first aid management of specific types of injury

First aid provision under specific constraints or circumstances (e.g. in confined spaces, in maritime work environment or in work environment involving identified risks/hazards)

Established first aid principles include:	Preserve life Prevent illness, injury and condition(s) becoming worse Promote recovery Protect the unconscious casualty
Vital signs include:	Consciousness Breathing Circulation
A hazard is:	A source or situation with the potential for harm in terms of human injury or ill-health, damage to property, the environment, or a combination of these
Hazards may include:	Physical hazards Biological hazards Chemical hazards Hazards associated with manual handling
Risks may include:	Risks from equipment, machinery and substances Risks from first aid equipment Environmental risks Exposure to blood and other body substances Risk of further injury to the casualty Risks associated with the proximity of other workers and bystanders Risks from vehicles

Casualty's condition is managed for:

Abdominal injuries
Airway obstruction
Allergic reactions
Altered and loss of consciousness
Bleeding
Burns - thermal, chemical, friction, electrical
Chest pain/cardiac arrest
Injuries: cold and crush injuries; eye and ear injuries; head, neck and spinal injuries; minor skin injuries; needle stick injuries; soft tissue injuries including sprains, strains, dislocations
Near drowning
Envenomation - snake, spider, insect and marine bites
Environmental conditions such as hypothermia, hyperthermia, dehydration, heat stroke
Fractures
Medical conditions, including cardiac conditions, epilepsy, diabetes, asthma and other respiratory conditions
No signs of life
Poisoning and toxic substances (including chemical contamination)
Respiratory distress/arrest
Seizures
Shock
Stroke
Substance misuse - common drugs and alcohol, including illicit drugs.

First aid management must take into account applicable aspects of:

The setting in which first aid is provided, including:

workplace policies and procedures
industry/site specific regulations, codes etc.

OHS requirements

state and territory workplace health and safety legislative requirements

location and nature of the incident

situational risks associated with, for example, electrical and biological hazards, weather, motor vehicle accidents

location of emergency services personnel.

The use and availability of first aid equipment and resources

Infection control

Legal and social responsibilities of first aider

Resources and equipment are used appropriate to the risk to be met and may include:

AED

First aid kit

Auto-injector

Puffer/inhaler

Resuscitation mask or barrier

Spacer device

Communication media and equipment may include but are not limited to:

Telephones, including landline, mobile and satellite phones

HF/VHF radio

Flags

Flares

Two way radio

Email

Electronic equipment

Hand signals

Appropriate clinical expert may include:

Supervisor/manager

Ambulance officer/paramedic

Other medical/health worker

Documentation may include:

Injury report forms

Workplace documents as per organisation requirements

Documentation may include recording:

Time

Location

Description of injury

First aid management

Fluid intake/output, including fluid loss via:

blood

vomit

faeces

urine

Administration of medication including:

time

date

person administering

dose

Vital signs

Unit Sector(s)

LMTTF2014A Weld plastic materials

Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit covers the skills and knowledge required to weld plastic materials within the safe operating parameters of the equipment used.

Application of the Unit

Application of the Unit

This unit applies to hot air and hot wedge welding of plastic in the textile fabrication industry. Work may be conducted in a variety of environments, such as:

- operational indoor workplaces
- operational outdoor workplaces
- hazardous or exposed conditions

Work may be conducted in small to large scale enterprises and may involve individual and team activities. Work is performed within defined procedures under direct supervision.

The application of this unit is according to OHS practices of the enterprise and workplace practices, which may include:

- requirements prescribed by legislation, awards, agreements and conditions of employment
- standard operating procedures
- work instructions
- oral, written and visual communication
- quality practices, including responsibility for maintenance of own work quality and contribution to quality improvement of team or section output
- housekeeping
- tasks related to environmental protection, waste disposal, pollution control and recycling

This unit requires the application of skills associated with planning and organising for the safe and effective use of welding processes and technology. This unit also requires an ability to interpret and communicate job related information, check the quality of outcomes and identify and address problems relating to own work. Self management skills are applied to ensure workplace and quality standards are achieved.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Select welding process and plan the work	1.1 Nature of <i>material</i> to be welded is determined and an appropriate welding process is selected 1.2 Work is planned to maximise safety and productivity 1.3 Suitable electrical power outlets, if required, are identified 1.4 Safe working environment is established 1.5 Workplace procedures and instructions are read and interpreted
2 Prepare welding equipment	2.1 Appropriate hand-held or stationary manual <i>welding equipment</i> is selected 2.2 Welding equipment is checked for serviceability 2.3 Correct 'power on' procedures are followed
3 Select, use and store tools	3.1 Appropriate supplementary <i>hand and power tools</i> are selected for the job 3.2 Tools are examined for damage, missing components or other defects (including frayed power cords where applicable) 3.3 Extension power cables are checked for knots and insulation damage 3.4 Electrical tools are connected safely to power supply 3.5 Safety equipment is used during tool operation in accordance with <i>OHS practices</i> 3.6 Required tasks are performed using tools in accordance with OHS practices 3.7 Tools are located in a safe position when not in use 3.8 Tools and extension cords are cleaned and stored in accordance with industry and workplace OHS practices
4 Perform welding	4.1 Surfaces of material are prepared for welding 4.2 Material is laid out on working table or other suitable surface 4.3 Material is anchored to prevent movement 4.4 Equipment temperature is adjusted to prescribed settings 4.5 Screens or barriers, where fitted, are lowered prior to welding process 4.6 Welding equipment is operated in accordance with standard practice 4.7 Weld area is examined or tested for correct fusion of materials 4.8 Work piece is removed 4.9 Knowledge of welding processes are applied to perform required tasks
5 Inspect quality, labelling and	5.1 Completed weld is informally inspected to verify that it appears to be of an acceptable standard

ELEMENT	PERFORMANCE CRITERIA
documentation	5.2 Completed product is labelled or tagged and any necessary documentation completed in accordance with workplace procedures
6 Clean up and maintain equipment	6.1 Work area is cleaned and tools and electrical equipment are stowed away

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Demonstrates knowledge of:

- specific OHS requirements associated with hot air and hot wedge welding
- hazards associated with heated plastics
- plastic welding principles and techniques
- general operating principles of plastic welding equipment
- a range of plastic welding equipment, hand tools and power tools commonly used in the plastic welding process and their appropriateness for particular applications
- power sources such as single phase, three phase and weather protected outlets
- materials and equipment specifications
- relevant quality standards for plastic welds
- environmental requirements of relevant industry and workplace procedures
- general housekeeping policies and procedures
- OHS practices, including hazard identification and control measures
- quality practices
- workplace practices
- recording and reporting practices

Demonstrates skills to:

- apply work instructions and established procedures
- understand relevant technical information about plastic welding processes, materials and equipment
- use relevant hand and power tools
- use relevant chemicals and cleaning agents and dispose of waste products
- maintain work area
- read, interpret and follow information on work specifications, standard operating procedures and work instructions and other reference material
- maintain accurate records
- communicate within the workplace
- sequence operations
- meet specifications
- clarify and check task-related information
- carry out work according to OHS practices

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Demonstrates skills and knowledge to:

- comply with all relevant safety requirements including safe use of plastic welding equipment, hand and power tools and electrical equipment.
- follow work orders
- understand equipment and materials specifications and instructions needed for the plastic welding process
- prepare material to be welded and set up welding equipment
- perform a variety of welds with a satisfactory degree of quality consistency
- perform normal operator maintenance of work area to enable work to be conducted safely and efficiently
- document and communicate work related information including reporting of faults and other problems

Consistently applies skills and knowledge when:

- organising work
- completing tasks
- identifying improvements
- using workplace practices
- using OHS practices
- recording and reporting accidents and incidents
- assessing operational readiness of equipment used and work processes
- recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions
- completing work systematically with attention to detail without damage to goods and equipment

Context and specific resources for assessment

Assessment may occur on the job or in an appropriately simulated environment and requires access to work areas, materials and equipment, and to information on workplace practices and OHS practices.

Guidance information for assessment

This unit may be assessed independently or in combination with other relevant units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs if the candidate, accessibility of the item, and local industry and regional contexts.

Legislative/regulatory requirements All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.

Material may include

- PVC
- vinyls
- clear plastics

Welding equipment may include

- foot controlled welder
- hand welder
- hot air welder
- hot wedge welder

Hand and power tools may include

- hammers
- rasps
- files
- portable sanders

OHS practices OHS practices must include hazard identification and control, risk assessment and implementation of risk reduction measures specific to the tasks described by this unit, and may include:

- manual handling techniques
- standard operating procedures
- personal protective equipment
- safe materials handling
- taking of rest breaks
- ergonomic arrangement of workplaces
- following marked walkways
- safe storage of equipment
- housekeeping
- reporting accidents and incidents
- other OHS practices relevant to the job and enterprise

Unit Sector(s)

Sector Textile Fabrication

LMTTF3004A Perform advanced welding of plastic materials

Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit covers the skills and knowledge required to perform high frequency welding of plastic materials using equipment within the safe operating parameters of the equipment used.

Application of the Unit

Application of the Unit

This unit applies to the welding of plastic in the textile fabrication industry. Work may be conducted in a variety of environments, such as:

- operational indoor workplaces
- operational outdoor workplaces
- hazardous or exposed conditions

Work may be conducted in small to large scale enterprises and may involve individual and team activities. Work is performed within defined procedures under direct supervision.

The application of this unit is according to OHS practices of the enterprise and workplace practices, which may include:

- requirements prescribed by legislation, awards, agreements and conditions of employment
- standard operating procedures
- work instructions
- oral, written and visual communication
- quality practices, including responsibility for maintenance of own work quality and contribution to quality improvement of team or section output
- housekeeping
- tasks related to environmental protection, waste disposal, pollution control and recycling

This unit requires the application of skills associated with planning and organising for the safe and effective use of advanced welding processes and technology. This unit also requires the ability to read and interpret workplace instructions, inspect and check the quality of outcomes, complete workplace records and identify and address problems relating to own work. Self management skills are applied to ensure workplace and quality standards are achieved.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

LMTTF2014A

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Prepare for welding	1.1 <i>Material</i> to be welded is examined and prepared for welding 1.2 Work is planned to maximise safety and productivity 1.3 Suitable electrical power outlets, if required, are identified 1.4 Safe working environment is established and welding equipment checked for serviceability 1.5 Workplace procedures and instructions are read and interpreted
2 Select and prepare tools	2.1 Appropriate supplementary <i>hand and power tools</i> are selected and prepared for the job 2.2 Extension power cables are checked for knots and insulation damage 2.3 Electrical tools are checked for safe connection to power supply 2.4 Tools are examined for damage, missing components or other defects (including frayed power cords where applicable) 2.5 Safety equipment is used during tool operation in accordance with <i>OHS practices</i> 2.6 Required tasks are performed using tools in accordance with OHS practices 2.7 Tools are located in a safe position when not in use 2.8 Tools and extension cords are cleaned and stored in accordance with industry and <i>OHS practices</i>
3 Perform high frequency welding	3.1 Surfaces of material are prepared for welding 3.2 Material is laid out on working table or other suitable surface and anchored to prevent movement 3.3 Equipment temperature or operating frequency is adjusted to prescribed settings 3.4 Screens or barriers, where fitted, are lowered prior to welding process 3.5 Operator and bystanders are kept at an appropriate distance or suitably protected when high frequency welding is being undertaken 3.6 Welding equipment is operated in accordance with OHS practices 3.7 Weld area is examined or tested for correct fusion of materials 3.8 Problems or faults are identified and addressed 3.9 Work piece is removed
4 Inspect quality, labelling and documentation	4.1 Completed weld is informally inspected to verify that it appears to be of an acceptable standard 4.2 Completed product is labelled or tagged and any necessary documentation completed in accordance with workplace

ELEMENT	PERFORMANCE CRITERIA
	procedures
5 Clean up and maintain equipment	5.1 Work area is cleaned and tools and electrical equipment are stowed away

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Demonstrates knowledge of:

- specific OHS requirements associated with high frequency welding equipment
- hazards associated with heated plastics
- plastic welding principles and techniques
- general operating principles of plastic welding equipment
- a range of plastic welding equipment, hand tools and power tools commonly used in the plastic welding process and their appropriateness for particular applications
- power sources such as single phase, three phase and weather protected outlets
- materials and equipment specifications
- relevant quality standards for plastic welds
- environmental requirements of relevant industry and workplace procedures
- general housekeeping policies and procedures
- OHS practices, including hazard identification and control measures
- quality practices
- workplace practices
- recording and reporting practices

Demonstrates skills to:

- apply work instructions and established procedures
- understand relevant technical information about plastic welding processes, materials and equipment
- use relevant hand and power tools
- use relevant chemicals and cleaning agents and dispose of waste products
- maintain work area
- read, interpret and follow information on work specifications, standard operating procedures and work instructions and other reference material
- maintain accurate records
- communicate within the workplace
- sequence operations
- meet specifications
- clarify and check task-related information
- carry out work according to OHS practices

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Demonstrates skills and knowledge to:

- comply with all relevant safety requirements including safe use of high frequency welding equipment, hand and power tools and electrical equipment.
- follow work orders
- understand equipment and materials specifications and instructions needed for the plastic welding process
- prepare material to be welded and set up welding equipment
- perform a variety of welds with a satisfactory degree of quality consistency
- perform normal operator maintenance of work area to enable work to be conducted safely and efficiently
- document and communicate work related information including reporting of faults and other problems

Consistently applies skills and knowledge when:

- organising work
- completing tasks
- identifying improvements
- using workplace practices
- using OHS practices
- recording and reporting accidents and incidents
- assessing operational readiness of equipment used and work processes
- recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions
- completing work systematically with attention to detail without damage to goods and equipment

Context and specific resources for assessment

Assessment may occur on the job or in an appropriately simulated environment and requires access to work areas, materials and equipment, and to information on workplace practices and OHS practices.

Guidance information for assessment

This unit may be assessed independently or in combination with other relevant units.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Legislative/regulatory requirements	All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.
Material may include	<ul style="list-style-type: none"> • PVC • vinyls • clear plastics
Welding equipment may include	<ul style="list-style-type: none"> • high frequency welder
Hand and power tools may include	<ul style="list-style-type: none"> • hammers • rasps • files • portable sanders
OHS practices	<p>OHS practices must include hazard identification and control, risk assessment and implementation of risk reduction measures specific to the tasks described by this unit, and may include:</p> <ul style="list-style-type: none"> • manual handling techniques • standard operating procedures • personal protective equipment • safe materials handling • taking of rest breaks • ergonomic arrangement of workplaces • following marked walkways • safe storage of equipment • housekeeping • reporting accidents and incidents • other OHS practices relevant to the job and enterprise

Unit Sector(s)

Sector Textile Fabrication

MEM05003B Perform soft soldering

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit applies to performing soft soldering applications of ferrous and non-ferrous materials, using straightforward techniques, where heat damage to components or finish of soldered joint is not critical.
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Application of the Unit

Application of the unit	<p>All work is undertaken to predetermined standards of quality, safety and procedures.</p> <p>Techniques of applying soft solder may include the use of soldering irons (all types) and direct flame or other heating devices. Preparation of materials includes cleaning, deburring, twisting of conductors and fluxing.</p> <p>Depending on the actual soldering job, hand and power tools and drawing and interpretation skills may be required. These are covered by units MEM18001C (Use hand tools), MEM18002B (Use power tools/hand held operations) and MEM12023A (Perform engineering measurements).</p> <p>This unit should not be selected if Unit MEM05001B (Perform manual soldering/desoldering - electrical/electronic components) or Unit MEM10002B (Terminate and connect electrical wiring) has already been selected.</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify job requirements	1.1. Soldering requirements are identified and correctly understood from job sheets or instructions.
2. Undertake soft soldering	2.1. Tools, equipment and consumables appropriate to the task are assembled and prepared for use as required. 2.2. Materials to be soldered are prepared, arranged and checked as required, to ensure solder joint meets specifications. 2.3. Correct techniques are used to apply soft solder to standard operating procedures. 2.4. Solder joint is cleaned and checked for conformance to specifications using standard operating procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- using soldering irons
- using direct flame and other heating devices
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures
- following oral instruction

Required knowledge

Look for evidence that confirms knowledge of:

- the effect of material to be soft soldered on the selection of consumables
- the reasons for preparing surfaces prior to soldering
- the procedures for rectifying defects in soldered joints
- use and application of personal protective equipment for soft soldering
- safe work practices and procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	A person who demonstrates competency in this unit must be able to perform soft soldering.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication materials handling, recording and reporting associated with performing soft soldering or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Tools	Soldering irons (all types) and direct flame or other heating devices
Materials	Ferrous and non-ferrous

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Fabrication
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MEM05007C Perform manual heating and thermal cutting

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers performing manual heating, thermal cutting and gouging including the assembly and disassembly and operation of the equipment on a range of materials (ferrous, non-ferrous and non-metallic) using a variety of methods.
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Application of the Unit

Application of the unit	<p>This unit applies to manual, straight line cutting standards. Manual or automatic processes are used to cut and heat to specifications. Cutting may include flame gouging by hand. All work is carried out to legislative and regulatory requirements. Predetermined standards of quality and safety are observed and work is carried out following standard operating procedures.</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assemble/disassemble plant and equipment	1.1. Accessories and equipment are correctly selected and assembled for manual heating and thermal cutting.
2. Operate heating and thermal cutting equipment	2.1. Cutting process and/or procedure appropriate for material is selected. 2.2. All safety procedures are observed. 2.3. Equipment start-up procedures are followed correctly to standard operating procedures. 2.4. Equipment adjustments are made correctly using standard operating procedures. 2.5. Appropriate cutting allowances are made. 2.6. Material is used in the most economical way. 2.7. Defects are identified and corrective action is taken to standard operating procedures. 2.8. Material is heated and cut to specification. 2.9. Shape/size/length is to accepted workplace standards.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- performing pre-start checks
- safely starting equipment
- following standard operating procedures
- adjusting equipment to operating specifications
- making cutting allowances
- economising material and minimising wastage
- identifying cutting defects and taking corrective action
- heating and cutting materials to specifications
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures. May include drawings

REQUIRED SKILLS AND KNOWLEDGE

- following oral instructions
- performing measurements needed to meet the requirements of this unit
- entering routine and familiar information onto proformas and standard workplace forms

Required knowledge

Look for evidence that confirms knowledge of:

- cutting processes appropriate to various materials
- heating and cutting specifications
- procedures for heating and cutting
- the tools, equipment and techniques for heating and cutting
- assembling procedures for equipment and accessories
- hazards and control measures associated with manual heating and thermal cutting
- use and application of personal protective clothing and equipment
- equipment pre-checks and operation
- procedures for adjusting heating and cutting equipment
- cutting allowances and reasons for applying them
- procedures for minimising waste material
- reasons for minimising waste material
- cutting defects and their causes
- procedures for correcting cutting defects
- tools, equipment and techniques required to correct cutting defects
- use and application of personal protective equipment
- safe work practices and procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	A person who demonstrates competency in this unit must be able to perform manual heating and thermal cutting.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with manual heating/thermal cutting or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questions should not require language, literacy and numeracy skills beyond those required in this unit. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Cutting	Use of hand held and self-propelled straight line cutters
Process	Fuel gas, oxy fuel gas and air fuel gas
Material	Various thicknesses and types including ferrous, non-ferrous and non-metallic materials

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units	

Competency field

Competency field	Fabrication
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MEM05012C Perform routine manual metal arc welding

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers preparing the materials and carrying out routine manual metal arc welding (MMAW).
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Application of the Unit

Application of the unit	<p>This unit applies in a maintenance or manufacturing environment where the welding is not required to meet an Australian standard or equivalent. Fillet and butt welds would typically be performed on low carbon/mild steels.</p> <p>Where welding is required to AS 1554 General Purpose or equivalent codes, occupational health and safety regulations and/or licensing requirements, Unit MEM05015D (Weld using manual metal arc welding process) should be selected.</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Refer to Application of the Unit

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify weld requirements	1.1. Weld requirements are identified from job instructions. 1.2. Location of welds is identified in accordance with standard operating procedures and job specifications.
2. Prepare materials for welding	2.1. Materials are cleaned and prepared ready for welding.
3. Prepare equipment for welding	3.1. Welding equipment is set up correctly. 3.2. Correct electrodes are selected to suit application and settings.
4. Perform routine welding using MMAW	4.1. Safe welding practices are applied. 4.2. Materials are welded to job requirements. 4.3. Welds are cleaned in accordance with standard operating procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- preparing materials and electrodes
- setting up welding equipment
- welding with MMAW
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures
- performing measurements for joint preparation and routine MMAW

Required knowledge

Look for evidence that confirms knowledge of:

- material and equipment preparation
- properties and characteristics of materials and consumables
- weld characteristics
- equipment set-up and settings
- MMAW processes and properties

REQUIRED SKILLS AND KNOWLEDGE

- post-welding treatments
- safe welding practices
- use and application of personal protective equipment

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	<p>A person who demonstrates competency in this unit must be able to prepare materials and carry out routine manual metal arc welding (MMAW).</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, i.e. the candidate is not in productive work, then appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with performing routine manual metal arc welding or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning should not require language, literacy and numeracy skills beyond those required in this unit. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>
Guidance information for	

EVIDENCE GUIDE

assessment

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Materials	Low and mild carbon steel or similar
Prepared	Cleaning, setting up jigs, fixtures, clamps, joint preparation
Welding equipment	Welding leads, welding machines, electrode holder etc.
Cleaned	Slag and spatter, cleaning, using files and grinders

Unit Sector(s)

Unit sector

Co-requisite units

Co-requisite units	

Competency field

Competency field	Fabrication
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MEM05050B Perform routine gas metal arc welding

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers preparing materials and routine gas metal arc welding (GMAW).
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Application of the Unit

Application of the unit	<p>This unit applies in a maintenance or manufacturing environment where the weld quality is not required to meet an Australian Standard or equivalent. Fillet and butt welds would typically be performed on low carbon/mild steels.</p> <p>Where welding is required to meet Australian Standard 1554 General Purpose or equivalent codes, occupational health and safety regulations and/or licensing requirements, Unit MEM05017D (Weld using gas metal arc welding process) should be selected.</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Refer to Application of the Unit

Pre-Requisites

Prerequisite units		

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify weld requirements	1.1. Weld requirements are identified from job instructions. 1.2. Locations of welds are identified in according to standard operating procedures and job specifications.
2. Prepare materials for welding	2.1. Materials are cleaned and prepared ready for welding.
3. Prepare equipment for welding	3.1. Welding equipment is set up correctly. 3.2. Settings and consumables are selected to suit application.
4. Perform routine welding using GMAW	4.1. Safe welding practices are applied. 4.2. Materials are welded to job requirements. 4.3. Welds are cleaned to standard operating procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- preparing materials
- setting up welding equipment
- welding with GMAW
- reading and interpreting routine information on written job instructions, specifications and standard operating procedures
- following oral instruction
- using measurement skills relating to joint preparation and routine GMAW

Required knowledge

Look for evidence that confirms knowledge of:

- different current and voltage settings, gas flow rates wire diameters, wire feed speed and other variables to suit typical situations.
- material and equipment preparation
- properties and characteristics of materials and consumables
- equipment and equipment settings

REQUIRED SKILLS AND KNOWLEDGE

- fuel gas properties and applications
- post-welding treatments
- weld characteristics
- safe welding practices
- use and application of personal protective equipment for routine GMAW

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	<p>A person who demonstrates competency in this unit must be able to perform routine gas metal arc welding (GMAW).</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with preparing the materials and carrying out routine gas metal arc welding or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>
Guidance information for	

EVIDENCE GUIDE

assessment

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Materials	Mild and low carbon steel
Prepared	Preheating, setting up jigs, fixtures, clamps, joint preparation
Equipment	Hoses, welding leads, gas shrouds, gas regulators, liners, contact tips
Consumables	Filler wire, shielding gas
Cleaned	Slag and spatter

Unit Sector(s)

Unit sector

Co-requisite units

Co-requisite units	

Competency field

Competency field	Fabrication
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MEM06001B Perform hand forging

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers using hand tools and formers, applying hand forging techniques and operating heat treatment equipment.
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Application of the Unit

Application of the unit	<p>The unit applies to hand forging low to medium carbon and alloy steels using a variety of techniques, tools, formers and heating devices.</p> <p>For simple manual heating and bending, see Unit MEM05007C (Perform manual heating and thermal cutting).</p> <p>Band: A</p> <p>Unit Weight: 4</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM18001C	Use hand tools

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Use hand tools and formers	1.1. Hand tools and formers are correctly selected for specific forging techniques. 1.2. Hand tools and formers used correctly.
2. Apply hand forging techniques	2.1. Knowledge of drawing, swaging, bending, upsetting, spreading, punching and drifting techniques is applied to produce articles to specification. 2.2. Forging temperatures and heat specifications are adhered to for various materials. 2.3. Allowance is made for material shrinkage and oxidation 2.4. Appropriate forging technique is selected and applied.
3. Operate heating equipment	3.1. Heating equipment is set up and operated correctly. 3.2. Equipment is operated in a manner that minimises oxidation. 3.3. Heat is controlled to specified areas.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills
Look for evidence that confirms skills in: <ul style="list-style-type: none"> • selecting and using hand tools and formers • applying hand forging techniques • determining correct forging temperatures • setting up and operating heating equipment
Required knowledge
Look for evidence that confirms knowledge of: <ul style="list-style-type: none"> • range of hand tools, formers used in hand forging • hand forging techniques (drawing, swaging, bending, upsetting, spreading, punching, drifting) • how to calculate mean diameter, length, circumference

REQUIRED SKILLS AND KNOWLEDGE

- source of information on forging temperatures
- heat specifications for various materials
- effects of and allowances for material shrinkage and oxidation
- the application, set up, and means of adjustment of a range of heating equipment
- use and application of personal protective equipment
- safe work practices and procedures
- hazards and control measures associated with hand forging, including housekeeping

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competency in this unit must be able to use hand tools and formers, apply hand forging techniques and operate heat treatment equipment. Competency in this unit cannot be claimed until all prerequisites have been satisfied.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.

Context of and specific resources for assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with hand forging of low to medium carbon and alloy steels using a variety of techniques, tools formers and heating devices or other units requiring the exercise of the skills and knowledge covered by this unit.

Method of assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes,

EVIDENCE GUIDE	
	standards, manuals and reference materials.
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Hand tools and formers	Flatters, set hammers, hot/cold sets, ball peen hammer, swages, etc.
Hand forging techniques	Drawing, swaging, bending, upsetting, spreading, punching and drifting
Materials	Low to medium carbon and alloy steels
Heating equipment	Diesel, electric and gas furnaces; coke fires and gaseous oxygen/fuel equipment

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units	

Co-requisite units		

Competency field

Competency field	Forging
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MEM09002B Interpret technical drawing

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers interpreting technical drawing applying to any of the full range of engineering disciplines.
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Application of the Unit

Application of the unit	<p>Technical drawings may utilise perspective, exploded views or hidden view techniques. Drawings are provided to Australian Standard 1100 and/or Australian Standard 1102 and their equivalents from the full range of engineering disciplines.</p> <p>Standard symbols to Australian Standard 1100 and/or Australian Standard 1102 or equivalent are recognised in field of employment. Technical drawings may include symbol glossaries.</p> <p>Where any drawing, sketch, chart, diagram is only used as the technique for communication, then this unit does not apply: see Unit MEM12023A (perform engineering measurements) or Unit MEM16006A (Organise and communicate information).</p> <p>Band: A</p> <p>Unit Weight: 4</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Select correct technical drawing	1.1. Drawing is checked and validated against job requirements or equipment. 1.2. Drawing version is checked and validated.
2. Interpret technical drawing	2.1. Components, assemblies or objects are recognised as required. 2.2. Dimensions are identified as appropriate to field of employment. 2.3. Instructions are identified and followed as required. 2.4. Material requirements are identified as required. 2.5. Symbols are recognised in the drawing as appropriate.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- checking the drawing against job requirements/related equipment in accordance with standard operating procedures
- confirming the drawing version as being current in accordance with standard operating procedures
- where appropriate, obtaining the current version of the drawing in accordance with standard operating procedures
- reading, interpreting information on the drawing, written job instructions, specifications, standard operating procedures, charts, lists and other applicable reference documents
- checking and clarifying task related information
- undertaking numerical operations, geometry and calculations/formulae within the scope of this unit

Required knowledge

Look for evidence that confirms knowledge of:

- application of AS1100.101 in accordance with standard operating procedures
- relationship between the views contained in the drawing

REQUIRED SKILLS AND KNOWLEDGE

- objects represented in the drawing
- units of measurement used in the preparation of the drawing
- dimensions of the key features of the objects depicted in the drawing
- understanding of the instructions contained in the drawing
- the actions to be undertaken in response to those instructions
- the materials from which the object(s) are made
- any symbols used in the drawing as described in range statement
- hazard and control measures associated with interpreting technical drawings, including housekeeping
- safe work practices and procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	A person who demonstrates competency in this unit must be able to interpret technical drawings as described.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with interpreting technical drawings or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning should not require language, literacy and numeracy skills beyond those required in this unit. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Interpret technical drawing

AS1100.101 is an extensive work and the candidate is not required to have complete familiarity with all its contents, the application of AS1100 would usually be in line with standard operating procedures; interpretation may require guidance particularly in respect to any geometric tolerancing

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Drawing, drafting and design
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MEM15001B Perform basic statistical quality control

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers taking samples and applying a statistical process to monitor production.
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Application of the Unit

Application of the unit	<p>This unit applies to the collation and interpretation of statistical data in the context of statistical quality control, for example, tally, run or control charts. Uncontrolled variations are reported to appropriate authority.</p> <p>When the production and interpretation of charts and graphs not dependent on knowledge and understanding of the implications for quality are required, Unit MEM12024A (Perform computations) should be accessed.</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Take samples	1.1. Difference between population and sample is understood and various sampling schemes are applied in accordance with standard operating procedures.
2. Apply statistical process to monitor production	2.1. Concept of variation in terms of average and spread is understood. Data is used to produce relevant statistical information. 2.2. Data is interpreted accurately and information is presented to appropriate authority according to standard operating procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- reading, interpreting and following information on written job instructions, standard operating procedures, charts, lists, drawings and other applicable reference documents
- applying statistical process control procedures in accordance with instructions to a given production process
- obtaining data from samples including average, range and random or assignable causes
- producing tally, run or control charts from sampling data
- reporting information from sampling data
- checking and clarifying task-related information
- completing proformas and standard workplace forms

Required knowledge

Look for evidence that confirms knowledge of:

- the difference between population and sample, and the concept of variation in terms of average and range, random and assignable causes
- numerical operations and statistical calculations/formulae within the scope of this unit

REQUIRED SKILLS AND KNOWLEDGE

- statistical process control procedures, which may include Six Sigma etc. and the sampling procedures to be followed
- the types of charts that can be produced to assist monitoring of products including run charts, tally charts, histograms, control charts
- procedures for reporting sample data information
- use and application of personal protective equipment
- safe work practices and procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	A person who demonstrates competency in this unit must be able to perform basic statistical quality control.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with performing basic statistical quality control or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Sampling schemes	Agreed customer plans, Acceptable Quality Level (AQL) and Average Outgoing Quality Level (AOQL) plans, Shainin, Six Sigma etc.
Relevant statistical information	Average, range and process control data and the plotting of charts such as line graphs, run charts, tally charts, histograms, control charts, random and assignable causes etc.

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units	

Competency field

Competency field	Quality
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MEM16006A Organise and communicate information

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers accessing, organising and communicating information related to processes or tasks.
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Application of the Unit

Application of the unit	<p>This unit applies in manufacturing, engineering or related environments.</p> <p>It may include information related to production, maintenance or associated processes. Information may be drawn from a variety of sources.</p> <p>This unit includes the ability to communicate using common workplace terminology.</p> <p>For access and recording of data requiring system knowledge and judgement, see Unit MEM16008A (Interact with computing technology).</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units	

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Access information and/or records	<p>1.1. Information requirements of tasks are determined and relevant information is accessed from a range of sources.</p> <p>1.2. Workplace terminology is correctly recognised.</p>
2. Organise and analyse information	<p>2.1. Information is interpreted and organised in accordance with enterprise and work requirements.</p> <p>2.2. Information is analysed according to enterprise and work requirements.</p>
3. Communicate organised information using established workplace methods	<p>3.1. Information is communicated using established workplace methods.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- accessing relevant information from a range of sources
- recording, where appropriate, the accessed information
- recognising and using workplace terms
- reading, interpreting and following information in workplace documentation
- checking and clarifying information
- organising, categorising and sequencing information

Required knowledge

Look for evidence that confirms knowledge of:

- types of information
- available sources of information
- information analysis techniques
- methods of categorising and organising information
- methods of recording and communicating information

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	<p>A person who demonstrates competency in this unit must be able to organise, analyse and communicate information.</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with organising, analysing and communicating information or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>
Guidance information for	

EVIDENCE GUIDE

assessment

Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Range of sources

Job instructions, specifications, standard operating procedures, charts, lists, documents, computer data, drawings, sketches, tables, technical manuals and/or charts and other applicable reference material

Workplace terminology

Terminology - referring to equipment, processes, workplace areas, staff and procedures - specific to the processes and equipment used in the workplace

Analyse

Analysis for this unit involves simple determinations of relevance and implication for the employee's immediate work requirements

Established workplace methods

- Proforma reports
- Data entry e.g. bar coding and simple keyboard operations
- Verbal
- Drawings

Unit Sector(s)

Unit sector

Co-requisite units

Co-requisite units		

Competency field

Competency field	Communication
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MEM16007A Work with others in a manufacturing, engineering or related environment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit covers operating in an interactive work environment.</p> <p>It covers contribution to a group effort in order to plan and carry out work. This includes identification of work roles, communication and cooperation with others.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to work-related group activities that typically occur in and between sections or departments of an enterprise. Employees would normally be working together to achieve a common purpose e.g. manufacture of a product, maintenance of plant and equipment.</p> <p>Individuals are not responsible for the overall group effort but would be required to contribute to activities and objectives using their own existing technical competencies.</p> <p>Band: A</p> <p>Unit Weight: 0</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify roles and responsibilities	1.1. Own role and responsibilities are identified. 1.2. Relationships within immediate group and with employees performing related/interdependent activities are identified.
2. Plan activities	2.1. Common goals, objectives and task requirements are identified and clarified with appropriate persons. 2.2. Individual tasks are determined and agreed on according to workplace procedures.
3. Work with others	3.1. Effective interpersonal skills are applied to interact with others and to contribute to activities and objectives. 3.2. Assigned or agreed tasks are performed in accordance with agreed requirements, specifications and workplace procedures. 3.3. Work progress is reviewed and modified as agreed to complement the work of others. 3.4. Agreed reporting lines are followed using standard operating procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- contributing to planning and allocation of work
- performing assigned tasks
- coordinating work effort with others
- following agreed reporting lines
- reading, interpreting and following information on written job instructions, specifications, standard operating procedures, charts, lists, drawings and other applicable reference documents
- applying effective interpersonal skills

Required knowledge

REQUIRED SKILLS AND KNOWLEDGE

Look for evidence that confirms knowledge of:

- effective interpersonal strategies and skills:
 - effective listening
 - basic speaking skills
 - use of terminology and jargon
 - giving and receiving feedback
 - checking and clarifying task-related information
 - interpreting instructions
 - basic conflict resolution
 - selecting modes and methods of communication
 - identifying and resolving communication breakdowns and barriers
 - principles of effective communication
- relationships and roles within immediate group and with interdependent others
- reporting relationships and procedures
- own responsibilities with respect to products/services to be provided
- skills and competencies of the individual and other employees performing interdependent activities
- common goals, objectives and task requirements
- sources of technical expertise/assistance
- appropriate forms of communication
- hazards and control measures associated with workplace activities, including housekeeping
- safe work practices and procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	A person who demonstrates competency in this unit must be able to operate in a work-based team environment.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with operating in a work-based team environment or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Effective interpersonal skills

Basic listening and speaking skills, use of terminology and jargon, giving and receiving feedback, interpreting instructions, verbal and non-verbal modes and methods of communication, communication breakdowns and barriers, basic principles of effective communication

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Communication
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MEM16008A Interact with computing technology

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers accessing, inputting and storing information used in manufacturing, engineering or related environments, using computing technology.
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Application of the Unit

Application of the unit	<p>This unit applies in manufacturing, engineering or related environments. It involves identifying the type and source of information required, and using the technology to access, input and store information. The equipment may include computers and a range of other equipment based on computing technology.</p> <p>Band: A Unit Weight: 2</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine job requirements	1.1. Nature and scope of task requirement are identified. 1.2. Information/data required to be accessed, input or stored is identified. 1.3. Source of information/data is identified.
2. Access information/data	2.1. Access procedures are followed. 2.2. Technology is navigated to find the required information/data. 2.3. Relevant software application menus, functions and commands are used to locate required information/data. 2.4. Information/data is retrieved using organisational procedures. 2.5. Information/data is checked for relevance to job requirements.
3. Input information/data	3.1. Relevant software menus, functions and commands are used to manipulate information/data. 3.2. Information/data is entered, changed, or removed as required.
4. Store information/data	4.1. Data/files are saved following standard procedures prior to exiting the application. 4.2. Data output is produced as required. 4.3. Procedures for shutting down/logging off/exiting computing technology are followed.
5. Access assistance as required	5.1. Appropriate personnel are identified and consulted as required. 5.2. Manuals, online help and other reference materials are identified and used as required.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

REQUIRED SKILLS AND KNOWLEDGE

- ability to enter or retrieve data using appropriate software applications
- reading, interpreting and following information on written job instructions, specifications, standard operating procedures, charts, lists, drawings and other applicable reference documents
- planning and sequencing operations
- checking and clarifying task-related information
- using numerical operations within the scope of this unit

Required knowledge

Look for evidence that confirms knowledge of:

- functions and capabilities of various types of computing technology used in the workplace
- functions of software applications
- hazards and control measures associated with using computing technology, including housekeeping
- safe work practices and procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	<p>A person who demonstrates competency in this unit must be able to interact with computing technology to achieve workplace outcomes.</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with interacting with computing technology or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning should not require language, literacy and numeracy skills beyond those required in this unit. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>
Guidance information for	

EVIDENCE GUIDE	
assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Access procedures	Logging on and security procedures, virus checks, start-up routines, application start-up
Technology	Hand held data recording devices, screen based equipment, personal computers, bar coders
Applications	<ul style="list-style-type: none"> • Word processing spreadsheets and databases • Customised engineering and manufacturing applications • Material Resource Planning (MRP) • Warehousing inventory applications • Predictive reliability and maintenance applications • Production data management applications
Data output	Report, email, chart, graph, printout, data transfer, labels

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Communication
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MEM16013A Operate in a self-directed team

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers an individual effectively participating in a highly developed and self-directed team.
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Application of the Unit

Application of the unit	<p>This unit applies to participation in a formally established, developed or developing self-directed team.</p> <p>Examples are engineering production teams responsible for a product or process, maintenance teams and special-purpose project teams.</p> <p>Typically, team parameters, constraints and objectives would be determined by sources external to the team.</p> <p>The team would be responsible for all aspects of its designated function and members would have day-to-day responsibility for managing themselves and their work.</p> <p>Typical team tasks might include planning and scheduling activities, making production-related decisions and acting on problems.</p> <p>Where team parameters require adjustment as a result of team discussions or planning, then appropriate authorisation and approvals are established using standard operating procedures. Individual team participants would already be competent with technical aspects of team activities.</p> <p>This unit is intended to apply to participation within a formally established and recognised team. Where an individual works with others, such as within a section or department, unit MEM16007A (Work with others in a manufacturing, engineering or related environment) should be regarded as sufficient.</p> <p>This unit may be included in a Certificate II in Engineering - Production Technology or higher qualification.</p> <p>Band: This unit has dual status and is to be regarded as both a Specialisation band A unit and Specialisation band B unit for progression to C5 (AQF level V).</p>
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	Unit Weight: 2
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM16007A	Work with others in a manufacturing, engineering or related environment

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify team function and composition	1.1. Team purpose and scope are identified and understood. 1.2. Team composition, including role of self and team members, is understood. 1.3. Established parameters, rules and team norms are identified and understood.
2. Participate in team planning	2.1. Significant contribution is made to planning the team activities, based on the individual's technical skills, knowledge and competence. 2.2. Contribution is made to the allocation and performance of team tasks.
3. Function effectively as a team member	3.1. Interaction with team members is in accordance with established rules, conventions and procedures. 3.2. Tasks and responsibilities are performed effectively and in accordance with team objectives. 3.3. Real or perceived issues are resolved by effective and appropriate contributions from team member. 3.4. Significant contribution is made to team performance, based on member's own technical skills and application of established principles and practices for effective teamwork.
4. Monitor and review team performance	4.1. The team member participates effectively in the planning and development of team review process. 4.2. Relevant performance data is collected and analysed on an individual and team basis using standard enterprise procedures and methodology. 4.3. Results are used to evaluate own and team performance against established performance indicators and to assist determination of improvement requirements. 4.4. Principles/techniques for effective team development are used to identify own/team improvement strategies.
5. Implement team performance improvements	5.1. Performance improvement processes and strategies are implemented on an individual and collective basis using standard enterprise procedures. 5.2. Individual and team performance improvements are evaluated using standard enterprise procedures. 5.3. Adjustments to improvement strategies are made in accordance with team requirements and standard

ELEMENT	PERFORMANCE CRITERIA
	enterprise procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- identifying team goals and objectives
- participating in team planning - shared and individual
- allocating tasks and sequencing activities
- communicating and interacting effectively with team members
- solving problems individually and with others
- resolving conflict
- performing various team behavioural functions - task and maintenance focused
- making individual and joint decisions
- coordinating effort with others to achieve common objectives
- collecting team performance data
- reviewing performance against indicators
- identifying strategies to improve team performance
- implementing performance improvement processes
- reading, interpreting and following information on written job instructions, specifications, standard operating procedures, charts, lists, drawings and other applicable reference documents
- checking and clarifying task-related information
- checking for conformance to specifications

Required knowledge

Look for evidence that confirms knowledge of:

- team objectives
- team targets/goals, performance indicators
- team member roles - task and behavioural
- team processes, rules and conventions
- scope of work for which the team is responsible
- methods for planning team activities
- team member technical skills, knowledge and competence, relevant to the tasks

REQUIRED SKILLS AND KNOWLEDGE

- being planned
- the person(s) responsible for team planning
- impact of planning decisions on other teams, personnel and/or resources
- procedures for obtaining resources
- structure, formation and operation of teams
- characteristics of effective teams
- strategies for effective team development/functioning
- effective team communication
- forms of team leadership and decision-making
- strategies for resolving conflict
- techniques for team problem-solving
- issues that may affect team performance
- the sources of data relevant team performance indicators
- reasons for reviewing team performance
- methods/procedures to evaluate team performance
- where appropriate, source(s) of approval to change team performance parameters
- processes/strategies for improving team performance
- hazards and control measures associated with operating in a self-directed team environment, including housekeeping
- safe work practices and procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>A person who demonstrates competency in this unit must be able to operate within a self-directed team. Competency in this unit cannot be claimed until all prerequisites have been satisfied.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
<p>Context of and specific resources for assessment</p>	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with operating within a self-directed team or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
<p>Method of assessment</p>	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>

EVIDENCE GUIDE**Guidance information for assessment****Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Team

- A highly developed and cohesive work group in which the individuals have a common aim, and in which the jobs and skills of each member fit in with those of others
- Team members manage day-to-day activities within operating parameters and constraints
- The team is typically characterised by interdependent and complementary effort, high cohesion and culture, conjunctive tasks, effective use of team resources and a focus on continuous improvement
- The team may have a single leader or shared leadership

Principles and practices for effective teamwork

- Relating to:
- goals
 - problem solving
 - resolving conflict
 - team leadership
 - team decision making
 - team rules and norms
 - team roles and behaviours
 - team maintenance

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Communication
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MEM18001C Use hand tools

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers using a range of hand tools for a variety of general engineering applications.
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Application of the Unit

Application of the unit	<p>Applications may include hand tools used for adjusting, dismantling, assembling and finishing of items or components, and the finishing, cutting, scraping of metallic and non-metallic material to size and shape. This includes simple tapping and threading and routine maintenance of hand tools.</p> <p>This unit should not be selected if the hand tool is dedicated to a single operation or machine and if only a machine specific/customised tool is used.</p> <p>When using hand held power tools or power tools used for hand held operations, refer to Unit MEM18002B (Use power tools/hand held operations).</p> <p>Band: A</p> <p>Unit Weight: 2</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Use hand tools	1.1. Hand tools are selected appropriate to the task requirements. 1.2. Hand tools are used to produce desired outcomes to job specifications which may include finish, tension, size or shape. 1.3. All safety requirements are adhered to before, during and after use. 1.4. Unsafe or faulty tools are identified and marked for repair according to designated procedures before, during and after use. 1.5. Routine maintenance of tools, including hand sharpening is undertaken according to standard operational procedures, principles and techniques. 1.6. Hand tools are stored safely in appropriate location according to standard operational procedures and manufacturers' recommendations.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills
Look for evidence that confirms skills in: <ul style="list-style-type: none"> • reading and following information on standard operating procedures • following verbal instructions • selecting hand tools appropriate to the task • using hand tools safely • identifying hand tool defects and marking for repair • maintaining/sharpening hand tools using appropriate techniques • storing hand tools in accordance with manufacturers'/standard operating procedures
Required knowledge
Look for evidence that confirms knowledge of: <ul style="list-style-type: none"> • applications of different hand tools in a general engineering context • common faults and/or defects in hand tools

REQUIRED SKILLS AND KNOWLEDGE

- procedures for marking unsafe or faulty tools for repair
- routine maintenance requirements for a range of hand tools
- storage location and procedures for a range of hand tools
- hazards and control measures associated with using hand tools
- use and application of personal protective equipment
- safe work practices and procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	<p>A person who demonstrates competency in this unit must be able to use hand tools for a range of general engineering applications.</p>
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
Context of and specific resources for assessment	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with using hand tools or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
Method of assessment	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>
Guidance information for assessment	

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. **Italicised** wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Hand tools	Hacksaws, hammers, punches, screwdrivers, sockets, wrenches, scrapers, chisels, gouges, wood planes and files of all cross-sectional shapes and types
Job specifications	Finish, tension, size or shape etc.
Routine maintenance	Cleaning, lubricating, tightening, simple tool repairs, hand sharpening and adjustments using engineering principles, tools, equipment and procedures

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units	

Competency field

Competency field	Maintenance and diagnostics
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MEM30001A Use computer aided drafting systems to produce basic engineering drawings

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers producing basic engineering drawings using a CAD system, under the direction of a supervisor.
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Application of the Unit

Application of the unit	<p>This unit applies to the production of drawings according to defined parameters and predetermined specifications that include materials, tolerances, codes and other specifications. All work is conducted under supervision.</p> <p>Standard CAD software would be used including inbuilt file management, macros and reports.</p> <p>Drawings include plans, diagrams, charts, circuits, systems or schematics.</p> <p>If basic engineering drawings are required, then Unit MEM30002A (Produce basic engineering graphics) should be selected. If detailed engineering drawings are required, then Unit MEM30003A (Produce detailed engineering drawings) should be selected.</p> <p>Band: 0</p> <p>Unit Weight: 0</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM16006A	Organise and communicate information
	MEM16008A	Interact with computing technology

Employability Skills Information

Employability skills	This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare the CAD environment	1.1. All relevant manuals, instructions and operating procedures for the CAD software are obtained in accordance with workplace procedures. 1.2. The CAD package is booted up in accordance with workplace procedures. 1.3. Screen display areas and basic parameters are set in accordance with instructions.
2. Produce a basic drawing	2.1. Basic CAD drawings are created and guidance is sought as required. 2.2. Drawings are prepared in accordance with AS 1100 or equivalent or in accordance with standard operating procedures. 2.3. As required, CAD drawings are reviewed with supervisor and/or other designated staff in accordance with company procedures.
3. Modify existing CAD drawings	3.1. Existing CAD drawings are located and modified by adding, deleting or changing drawing elements within that drawing.
4. Produce output	4.1. Drawing files are saved in the appropriate format in accordance with standard operating procedures. 4.2. Drawing files are printed out using plotter or equivalent devices.
5. Perform exit and shut-down procedures	5.1. Programs and computer are shut down in accordance with workplace procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- reading and interpreting engineering specifications
- organising information
- using computer and peripherals

REQUIRED SKILLS AND KNOWLEDGE

- | |
|---|
| <ul style="list-style-type: none">• using CAD program• preparing simple drawings in plane orthogonal, isometric projection or equivalent |
|---|

Required knowledge

Look for evidence that confirms knowledge of:

- | |
|--|
| <ul style="list-style-type: none">• CAD program capabilities and processes |
|--|

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>A person who demonstrates competency in this unit must be able to use computer aided drafting systems to produce basic engineering drawings. Competency in this unit cannot be claimed until all prerequisites have been satisfied.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
<p>Context of and specific resources for assessment</p>	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with producing basic engineering drawings using computer aided drafting systems, or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
<p>Method of assessment</p>	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes,</p>

EVIDENCE GUIDE	
	standards, manuals and reference materials.
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Basic parameters	Include layer or level, line type, line width, colour and text format etc.
Basic CAD drawings	Include the following characteristics: lines, arcs, circles, polygons, ellipses, hatching or filling of areas, text, dimensions and tangents
Equivalent devices	May include ink jet printers or the like

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Engineering technician
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MEM30004A Use CAD to create and display 3D models

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers using a CAD program to produce and plot basic three dimensional view drawings.
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Application of the Unit

Application of the unit	<p>This unit applies to the production of three dimensional models using computer aided design and drawing software and associated equipment. This will include the use of region and solid modelling techniques, section views, and pre-drawn library files. Work also includes extraction of properties and application of basic rendering techniques.</p> <p>All work is conducted under supervision.</p> <p>Band: 0</p> <p>Unit Weight: 0</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM16006A	Organise and communicate information
	MEM16008A	Interact with computing technology

Prerequisite units		
	MEM30001A	Use computer aided drafting systems to produce basic engineering drawings

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Set up a three dimensional environment	1.1. Set up a three dimensional environment on the screen to allow multiple viewing.
2. Create three dimensional views	2.1. Three dimensional views are created on the screen by manipulation of drawing planes and insertion of three dimensional geometric shapes. 2.2. Any plane of the three dimensional view is drawn on. 2.3. Editing functions are used to modify three dimensional geometric shapes in creating three dimensional views.
3. Display three dimensional views	3.1. Wire line, surface and solid face displays are produced in isometric, perspective and orthographic projections.
4. Extract mass and area properties of a 3D model	4.1. The mass and surface area of a given solid model made from a nominated material is extracted.
5. Apply basic rendering techniques to a 3D model	5.1. A solid model is rendered to a specified set of criteria.
6. Save completed drawing file in various formats	6.1. File is saved in an appropriate format to enable retrieval and use in a CAD system. 6.2. File is saved in other formats to enable retrieval in other software applications.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Look for evidence that confirms skills in:

- reading and interpreting engineering specifications
- organising information
- using computer and peripherals

REQUIRED SKILLS AND KNOWLEDGE

- using CAD program
- saving 3D modes in various file formats
- preparing drawings in plane orthogonal, isometric projection or equivalent

Required knowledge

Look for evidence that confirms knowledge of:

- region modelling techniques.
- solid modelling techniques
- development of sectioned models
- use of cutting plane
- use of cross hatching
- use of pre-drawn library files and primitives to produce a 3D model
- use of third level software to produce 3D models
- how to extract mass and area properties
- how to extract area properties from region models
- application of basic rendering techniques to a 3D model

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>A person who demonstrates competency in this unit must be able to use CAD to create and display 3D models. Competency in this unit cannot be claimed until all prerequisites have been satisfied.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
<p>Context of and specific resources for assessment</p>	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with using CAD to create and display 3D models or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
<p>Method of assessment</p>	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>

EVIDENCE GUIDE

Guidance information for assessment	
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Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Multiple viewing

Includes top views, front and side views, and a general three dimensional view

Three dimensional geometric shapes

May include arcs and lines, spheres, cones, cylinders and boxes

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units	

Competency field

Competency field	Engineering technician
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MEM30024A Participate in quality assurance techniques

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers participating in quality improvement programs at a basic level.
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Application of the Unit

Application of the unit	<p>This unit applies to all fields of engineering. Skills are applied to working in teams and work is carried out under supervision.</p> <p>Band: 0</p> <p>Unit Weight: 0</p>
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM15001B	Perform basic statistical quality control

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Interpret and apply quality standards and procedures	1.1. Quality standards and procedures are interpreted and applied to individual and teamwork in accordance with standard operating procedures.
2. Monitor and report on quality	2.1. Quality of all received, in-work and finished materials and products is monitored as required in accordance with standard operating procedures. 2.2. Designated process improvement tools are used either individually or in a team to identify and solve design, development and production quality problems. 2.3. Designated analytical tools are used to evaluate principal causes of process variation in consultation with the team or other subject experts. 2.4. Further action to improve quality is recommended, where required, using standard operating procedures.
3. Assist in implementing approved improvement strategy or strategies	3.1. Key indicators and performance measures are established and agreed in consultation with the team or other subject experts. 3.2. Process, product output is measured against key indicators in consultation with the team or other subject experts. 3.3. Steps are taken to lock in improvements in accordance with standard operating procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills
Look for evidence that confirms skills in: <ul style="list-style-type: none"> • undertaking problem solving • undertaking basic arithmetic calculations • interpreting known data • using standard texts and references • undertaking simple report writing

REQUIRED SKILLS AND KNOWLEDGE

- reading and interpreting engineering specifications

Required knowledge

Look for evidence that confirms knowledge of:

- the importance of quality
- the key principles of quality improvement programs
- the influence of variation
- use and application of Australian standards/ ISO 9000 etc.
- quality policy
- quality manuals
- quality procedures
- quality definitions
- purpose of quality audits
- simple sampling techniques and possible sources of sampling error and bias
- simple statistical tools
- problem solving techniques including:
 - process flow charts, interpretation and construction of simple case
 - cause and effect diagrams, fault trees etc.
 - root cause analysis
 - Pareto diagrams

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>A person who demonstrates competency in this unit must be able to participate in quality assurance techniques - basic. Competency in this unit cannot be claimed until all prerequisites have been satisfied.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.</p>
<p>Context of and specific resources for assessment</p>	<p>This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.</p> <p>This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with participating in quality assurance techniques - basic, or other units requiring the exercise of the skills and knowledge covered by this unit.</p>
<p>Method of assessment</p>	<p>Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.</p>

EVIDENCE GUIDE

Guidance information for assessment	
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Range Statement**RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Quality standards and procedures	Includes quality programs such as TQC, six sigma etc., quality policy, quality manuals, ISO 9000 and associated quality standards
Process improvement tools	Includes process flow charts, cause and effect diagrams, brainstorming sessions, Pareto diagrams, check sheets, run chart, scatter diagrams etc.
Analytical tools	Can include statistical analysis, critical incident analysis, root cause analysis etc.

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units	

Co-requisite units		

Competency field

Competency field	Engineering technician
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MSACMC210A Manage the impact of change on own work

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills needed by an employee in a competitive manufacturing organisation which requires the employee to participate in and manage the impact of the implementation of competitive manufacturing initiatives on their own work life.
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Application of the Unit

Application of the unit	<p>In a typical scenario, an employee in a competitive manufacturing organisation is required to positively participate in ongoing and continuous change in order for them to be implemented successfully. The employee will be expected to deal with these changes as part of a team and to give feedback from their own perspective.</p> <p>This unit requires the application of skills associated with problem solving, planning and organising and self management for assessing and managing the impact of change on own work. This unit also requires the ability to seek information and feedback from team members on the impact of changes and suggested improvements.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Examine the impact of change on own work practices	1.1. Examine changes to work flow 1.2. Examine changes to equipment/process/physical environment 1.3. Examine changes to work relationship with team members and other teams 1.4. Examine changes to data collection needs 1.5. Examine changed work for impacts on health, safety and environment 1.6. Examine changes to quality requirements 1.7. Identify any additional individual skill needs 1.8. Identify other areas requiring assistance 1.9.
2. Implement change	2.1. Review changes which may have adverse impact with team leader 2.2. Adopt changes to individual work practice 2.3. Seek assistance in gathering/processing data as required 2.4. Implement the data collection/processing and take actions on resulting information in accordance with <i>procedures</i> 2.5. Seek assistance/training to meet needs caused by change
3. Implement continuous improvement	3.1. Critically examine all changes 3.2. Identify impacts of changes both up and down the immediate <i>value chain</i> 3.3. Identify areas for improvement 3.4. Make recommendations for improvement in accordance with procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analysis
- communication
- problem solving
- reading and interpreting
- teamwork

Required knowledge

- current process and principles of operation
- sources of data on the process/plant and possible applications to information
- methods of determining own skill needs and developing skills required
- health, safety and environment (HSE) principles as relevant to own job
- basic continuous improvement principles

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for the training package.	
Overview of assessment requirements	The employee will respond readily to each initiative, making its implementation easier and recommending improvements.
What critical aspects of evidence are required to demonstrate competency in this unit?	Evidence of commitment to a range of initiatives should be available.
What are the specific resource requirements for this unit?	Access to an organisation using competitive manufacturing.
In what context should assessment occur?	Assessment will need to occur in a workplace following competitive manufacturing.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	This unit may be assessed concurrently with any other relevant unit which relates to making a change in the workplace.
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>

EVIDENCE GUIDE

What evidence is required for demonstration of consistent performance?

If evidence is provided from an initial move to competitive manufacturing, then sufficient evidence may come from this initial adjustment. Where evidence is provided from a series of improvements, then it will need to be gathered from a range of initiatives to provide sufficient evidence.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Managing impact of change

All Elements may be undertaken individually or as part of a team and may require assistance from the team leader for areas outside the employee's range of responsibility and authority.

Competitive manufacturing

Competitive manufacturing is used to describe the range of systemic manufacturing practice concepts and approaches. It covers but is not limited to:

- lean manufacturing
- agile manufacturing
- preventative and predictive maintenance approaches
- monitoring and data gathering systems such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Manufacturing Resource Planning (MRP), and proprietary systems such as SAP
- statistical process control systems including six sigma and three sigma
- Just In Time (JIT), kanban and other pull related manufacturing control systems
- supply, value, and demand chain monitoring and analysis
- other continuous improvement systems.

Competitive manufacturing should be interpreted so as to take into account the stage of implementation of competitive manufacturing approaches, the enterprise's size and work organisation, culture, regulatory environment and manufacturing sector.

Procedures

Procedures include all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, verbal, computer based or in some other form.

For the purposes of this Training Package, 'procedures'

RANGE STATEMENT	
	also includes good operating practice as may be defined by industry codes of practice (eg Good Manufacturing Practice (GMP), Responsible Care) and government regulations.
Continuous improvement	Continuous improvement (also called kaizen) - the philosophy of continual improvement, that every process can and should be continually evaluated and improved in terms of time required, resources used, resultant quality, and other aspects relevant to the process.
Value chain	Competitive manufacturing organisations encompass the entire production system, beginning with the customer, and includes the product sales outlet, the final assembler, product design, raw material mining and processing and all tiers of the value chain (sometimes called the supply chain). Any truly 'competitive' system is highly dependent on the demands of its customers and the reliability of its suppliers. No implementation of competitive manufacturing can reach its full potential without including the entire 'enterprise' in its planning.

Unit Sector(s)

Unit Sector	CM Change/interpersonal
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMC614A Develop a communications strategy to support production

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills needed to develop and implement a communications strategy to support production in a competitive manufacturing environment.
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Application of the Unit

Application of the unit	<p>In a typical scenario, a person (who may be a manager, technical specialist or other person) is required to analyse a situation to determine the required communication strategies from a wide range of possibilities and then implement that strategy or modify an existing strategy.</p> <p>This unit primarily requires the application of skills associated with developing effective communication strategies. Problem solving, initiative and enterprise, and planning and organising are required to ensure communications are targeted and meet the needs of stakeholders. This unit also requires aspects of self management and learning to ensure improvement of own communication effectiveness.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine information needs of employees and manufacturing systems	1.1. Examine <i>competitive manufacturing</i> strategy and determine broad information framework 1.2. Examine the production process and its requirements and determine the information needs of production employees 1.3. Examine the maintenance strategy and determine the information needed by maintenance employees 1.4. Examine the office, logistics, sales, marketing and other areas supporting production and determine the information needs of employees 1.5. Discuss information used and desired with employees at all relevant levels, and involve team and other key personnel in strategy development to ensure awareness, learning and commitment 1.6. Examine control systems to determine their data needs
2. Select communication strategy	2.1. Analyse required information flows 2.2. Determine <i>access requirements</i> by information users 2.3. Evaluate suitability of <i>communication media</i> for required information flows and access 2.4. Discuss possible strategy with relevant stakeholders 2.5. Select an appropriate strategy or strategies.
3. Implement strategy	3.1. Develop list of what needs to be done 3.2. Determine resources required to implement strategy 3.3. Obtain authority for communication media to be developed 3.4. Monitor development of communication media and take appropriate corrective action as required 3.5. Deploy developed communication media
4. Monitor ongoing situation	4.1. Determine relevant indicators for communication strategy 4.2. Monitor indicators 4.3. Re-evaluate communication needs on a regular basis

ELEMENT	PERFORMANCE CRITERIA
	4.4. Make improvements to the communication strategy as appropriate.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- negotiating
- communication
- team work
- problem solving
- planning and organising

Required knowledge

- knowledge of communication media
- communication needs of the organisation and its individuals

Evidence Guide

<p>EVIDENCE GUIDE</p> <p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment requirements</p>	<p>Assessment should aim to demonstrate that the person being assessed can develop a communication strategy which will meet the information needs of a competitive manufacturing organisation and its employees.</p>
<p>What are the specific resource requirements for this unit?</p>	<p>Access to a workplace implementing competitive manufacturing strategies is required. No other specific resources are required.</p>
<p>What critical aspects of evidence is required to demonstrate competency in this unit?</p>	<p>Evidence of developing/improving a communications strategy.</p>
<p>In what context should assessment occur?</p>	<p>Assessment will need to occur in a competitive manufacturing organisation and where the individual is responsible for the communication strategy or by case study.</p>
<p>Are there any other units which could or should be assessed with this unit or which relate directly to this unit?</p>	<p>This unit may be assessed concurrently with appropriate units</p>
<p>What method of assessment should apply?</p>	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p>

EVIDENCE GUIDE	
	The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.
What evidence is required for demonstration of consistent performance?	Evidence should be available from an extended period of time and may be historic if the person has been in this role for some time.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Competitive manufacturing</p>	<p><i>Competitive manufacturing</i> is used to describe the range of systemic manufacturing practice concepts and approaches. It covers but is not limited to:</p> <ul style="list-style-type: none"> • lean manufacturing • agile manufacturing • preventative and predictive maintenance approaches • monitoring and data gathering systems such as Systems control and data acquisition software (SCADA), enterprise resource planning systems (ERP), Manufacturing resource planning (MRP), and proprietary systems such as SAP • statistical process control systems, including six sigma and three sigma • Just In Time (JIT), kanban and other pull related manufacturing control systems • supply, value, and demand chain monitoring and analysis • other continuous improvement systems. <p>Competitive manufacturing should be interpreted so as to take into account the stage of implementation of competitive manufacturing approaches, the enterprise's size and work organisation, culture, regulatory environment and manufacturing sector.</p>
<p>Access requirements</p>	<p>Access requirements include:</p> <ul style="list-style-type: none"> • occasional access • periodic access • continual access • visual/auditory/tactile access • online/hard copy access • specific location • many or generalised locations
<p>Communication media</p>	<p>Communication media include:</p>

RANGE STATEMENT	
	<ul style="list-style-type: none"> • manuals such as SOPs, OHS and training manuals • aide memoir • verbal • signage • instruction displays • tags, isolations/lockouts • permits to work/clearances • operator reporting • visual factory type displays • painted walkways • tools/keys/buttons with a specific feel
Stakeholders	Includes team members, personnel officers, industrial officers, union delegates, production management, human relations management, financial management, engineering/ technical personnel.

Unit Sector(s)

Unit Sector	CM Change/interpersonal
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMS200A Apply competitive manufacturing practices

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills needed to implement basic improvement practices within a competitive manufacturing organisation. The unit focuses on bringing together the basic concepts and the holistic application of these basic concepts and processes to manufacturing. It would typically be carried out working as part of a team.
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Application of the Unit

Application of the unit	<p>In a typical scenario, an organisation has embarked on the competitive manufacturing path. This requires certain critical skills and principles to be practised in order for competitive manufacturing to succeed. These skills are to be used within the scope of the individual's job and authority.</p> <p>This unit requires the application of skills associated with planning and organising own role within a competitive manufacturing framework. Initiative and enterprise and problem solving is also required to identify the contributions of self and others in the value chain and identify opportunities for improvement.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Focus on the basic competitive manufacturing concepts	1.1. Identify <i>customers</i> and their needs/requirements 1.2. Identify <i>suppliers</i> 1.3. Identify value contributions along the chain 1.4. Identify and recommend methods of increasing own contribution to the value chain
2. Improve the product/process value	2.1. Identify customer features/benefits in the product 2.2. Identify items which contribute to those features/benefits 2.3. Identify things which do not contribute to customer benefits/features 2.4. Recommend methods of increasing features/benefits
3. Use competitive manufacturing tools	3.1. Select appropriate tools for the job/process 3.2. Apply the tool to the job/process 3.3. Monitor the job/process and make adjustments to improve it in accordance with <i>procedures</i> 3.4. Identify own skill requirements and seek skill development if required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analysis
- communication
- planning
- teamwork
- problem solving

Required knowledge

- the customers and the benefits they derive from the products
- the suppliers and their capabilities
- product waste
- relevant tools for their job and how to apply them
- factors impacting on the product, process and waste, particularly those wholly or partially under their control (and how to control them)

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
Overview of assessment requirements	The person will work effectively in a competitive manufacturing environment, making continual positive contributions to the improvement of the business within the scope of their job.
What are the specific resource requirements for this unit?	Access is required to an organisation implementing competitive manufacturing.
What critical aspects of evidence are required to demonstrate competency in this unit?	There should be evidence of the individual's contribution to the value chain and willing application of competitive manufacturing to their job.
In what context should assessment occur?	Assessment should occur in an organisation implementing competitive manufacturing.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	<p>This unit is related to all other units at this level in that it is the general implementation of competitive manufacturing. It could be assessed concurrently with any unit dealing with the <i>tools</i> of competitive manufacturing.</p> <p>This unit is related to:</p> <ul style="list-style-type: none"> • <i>MSACMS400A Implement a competitive manufacturing system</i> which covers the intermediate skill levels in CM.
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p>

EVIDENCE GUIDE	
	The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.
What evidence is required for demonstration of consistent performance?	This should be a routine part of the operator's job and there should be evidence that these skills are practised routinely.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Competitive manufacturing</p>	<p>Competitive manufacturing is used to describe the range of systemic manufacturing practice concepts and approaches. It covers but is not limited to:</p> <ul style="list-style-type: none"> • lean manufacturing • agile manufacturing • preventative and predictive maintenance approaches • monitoring and data gathering systems such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Manufacturing Resource Planning (MRP), and proprietary systems such as SAP • statistical process control systems including six sigma and three sigma • Just In Time (JIT), kanban and other pull related manufacturing control systems • supply, value, and demand chain monitoring and analysis • other continuous improvement systems. <p>Competitive manufacturing should be interpreted so as to take into account the stage of implementation of competitive manufacturing approaches, the size of the enterprise, the work organisation, culture, regulatory environment and manufacturing sector.</p>
<p>Customer</p>	<p>Customer may be interpreted to be an internal customer, but typically the benefits to the final customer should be used as the basis for the identification of waste. The operator does not need to interface directly with the external customer, but should be provided with sufficient information to enable them to identify customer benefits and features.</p> <p>Supplier may be interpreted to be an internal supplier, but typically the external supplier and their abilities should be known. The operator does not need to interface directly with the external supplier, but should</p>

RANGE STATEMENT	
	be provided with sufficient information to enable them to identify supplier abilities.
Tools	Tools are used in this unit to mean the tools of competitive manufacturing such as 5S, 6 s , continuous improvement, cause effect diagrams
Procedures	<p>Procedures include all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, verbal, computer based or in some other form.</p> <p>For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Good Manufacturing Practice (GMP), Responsible Care) and government regulations.</p>

Unit Sector(s)

Unit Sector	CM Systems
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMS201A Sustain process improvements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills needed to prevent implemented process improvements slipping back to former practices or digression to less efficient practices.
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Application of the Unit

Application of the unit	<p>The unit covers the skills needed to ensure that process improvements are sustained and opportunities taken to suggest further improvements.</p> <p>Improvement initiatives can be made by any of a number of methods and by teams or individuals. The unit assumes that desired levels of performance or quality are known to employees.</p> <p>This unit applies to an environment where continuous improvement in a manufacturing enterprise is being undertaken. The identification of the improvement may occur independently of the application of this unit. The unit can be applied to all areas of a manufacturing enterprise including production, maintenance, logistics and office functions.</p> <p>This unit requires the application of skills associated with problem solving, initiative and enterprise and self management in order to understand, implement and monitor improvement practices with the operation of plant, equipment and manufacturing processes. It also requires the ability to identify and address personal skill gaps in order to manage own ability to implement change.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Implement corrective actions	1.1. Identify impact of process improvements on systems in own work area 1.2. Examine process improvements to equipment, processes or products 1.3. Clarify changes to process improvements as required 1.4. Identify any additional, personal skill gaps and seek skill development 1.5. Adopt improved process
2. Check changes	2.1. Identify claimed <i>improvements</i> 2.2. Identify methods of observing claimed improvements 2.3. Check if claimed improvements are occurring and report problems in accordance with procedures
3. Check for further improvements	3.1. Look for areas of possible further improvement 3.2. Discuss further improvements with peers and supervisors 3.3. Take action to make improvements in accordance with procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills
<ul style="list-style-type: none"> • technical competence to perform job • problem solving • teamwork • communication
Required knowledge
<ul style="list-style-type: none"> • existing procedures • modified procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.

<p>Overview of assessment requirements</p>	<p>The person will be able to demonstrate their willing adoption of new equipment, processes, procedures and practices as well as their expertise at implementing them and making critical reviews of their performance in line with their level of competence and authority.</p>
<p>What critical aspects of evidence are required to demonstrate competency in this unit?</p>	<p>Evidence of having sustained improvements in their own job and of assessing these improvements for their real impact.</p>
<p>What are the specific resource requirements for this unit?</p>	<p>Access to a workplace implementing competitive manufacturing strategies or appropriate simulated environment is required. No other specific resources are required.</p>
<p>In what context should assessment occur?</p>	<p>Assessment will need to occur in a workplace where improvements are occurring which impact on the operator's job and they are required to implement changes which sustain these improvements.</p> <p>The unit may also be assessed on a project basis in a simulated environment.</p>
<p>Are there any other units which could or should be assessed with this unit or which relate directly to this unit?</p>	<p>This unit may be assessed concurrently with appropriate units on continuous improvement/kaizen.</p> <p>This unit relates to improvements in a person's own area of responsibility. <i>MSACMS401A Ensure process improvements are sustained</i> is an intermediate skill level unit in the CM.</p>
<p>What method of assessment should apply?</p>	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p>

EVIDENCE GUIDE	
	<p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
What evidence is required for demonstration of consistent performance?	Evidence should be available from multiple small changes, or from a large change which has had multiple facets implemented over a period of some months.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Performance	<p>Performance may be thought of as the rate of output of the plant compared to the rate required to meet demand.</p> <p>Performance might also be thought of in terms of takt where takt time is the allowable time to produce one product at the rate customers are demanding it. This is NOT the same as cycle time, which is the normal time to complete an operation on a product (which should be less than or equal to takt time).</p>
Procedures	<p>All work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, verbal, computer based or in some other form.</p> <p>For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Good Manufacturing Practice (GMP), Responsible Care) and government regulations.</p>
Improvements	<p>Improvement procedures in some enterprises is also known by baka-yoke which is a manufacturing technique of preventing mistakes by designing the manufacturing process, equipment and tools so that an operation literally cannot be performed incorrectly. An attempt to perform incorrectly, as well as being prevented, is usually met with a warning signal of some sort; the term poka-yoke is sometimes referred to as a system where only a warning is provided.</p>

Unit Sector(s)

Unit Sector	CM Systems
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMS601A Analyse and map a value chain

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit covers the skills needed to analyse and map a value chain, including the clear identification of the place of a manufacturing enterprise in the value chain and its contribution to the value chain. The unit will cover the identification of enterprises in a value chain, including their relationships and the activities undertaken by value chain enterprises. The identification skills include identification at the virtual or information level, the technical or process level and at the physical or logistic level.</p> <p>The unit includes the analysis of value adding and non-value adding activities and the information needs for successful value chain mapping, including information technology (IT) needs.</p> <p>This unit covers the analysis of the supply chain, the demand chain as well as the overall value chain.</p>
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Application of the Unit

Application of the unit	In a typical scenario, the person (who may be a production/plant manager, purchasing/technical officer or similar) needs to analyse a value chain, a supply chain or a demand chain in order to understand the interactions between all members and determine the value added/potential value added by each member. This is the basis for the design of <i>Just in Time (JIT)</i> and for the determination of <i>waste</i> . Value chain analysis is not just a one off activity but rather an ongoing activity of re-analysis as the value chain changes as its members progress towards truly competitive manufacturing.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	MSACMT631A	<i>Undertake value analysis of product costs in terms of customer requirements.</i>
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Employability Skills Information

Employability skills	This unit contains employability skills
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Map the value stream	1.1. Select a product/product group for analysis 1.2. Identify ultimate customer/s 1.3. Identify ultimate supplier/s 1.4. Identify all organisations between ultimate supplier and ultimate customer 1.5. Identify all steps in own organisation
2. Define customer need	2.1. Determine the features/benefits obtained by customers from product/s 2.2. Determine methods of measuring the contribution to each features/benefits 2.3. Identify possible data sources for required measures 2.4. Implement measurement of contribution to features/benefits
3. Assess the value added at each step	3.1. Identify value contributed by each external organisation 3.2. Determine value added by each internal step 3.3. Determine method of measuring value added
4. Reduce waste	4.1. Compare value added to customer benefit/feature 4.2. Identify activities which do not add to customer benefit/features 4.3. Liaise with external value chain members to determine methods to reduce overall waste 4.4. Take required actions to reduce waste

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analysis
- problem solving
- communication
- calculations
- negotiation

Required knowledge

- purpose of value chain analysis
- methods of value chain analysis
- types of waste and methods of reducing it
- process used to make product
- processes employed by other members of the value chain sufficient to have meaningful dialog with them

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment requirements	The person will have a current value map and will be continuously updating the analysis of the value chain to drive further improvement both in their own organisation and also others in the value chain.
What are the specific resource requirements for this unit?	Access to an organisation following competitive manufacturing.
What critical aspects of evidence are required to demonstrate competency in this unit?	Evidence of a current analysis of the value chain should be available, along with the waste reductions which flow from it.
In what context should assessment occur?	Assessment needs to occur in an organisation pursuing competitive manufacturing, or by use of a project or case study.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	This unit could be assessed concurrently with other units related to development and improvements of systems for competitive manufacturing.
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed</p>

EVIDENCE GUIDE	
	with the assessee prior to the commencement of the assessment.
What evidence is required for demonstration of consistent performance?	Where evidence is provided from an initial value chain analysis, then this may provide sufficient evidence. Where evidence is from an ongoing updating of an analysis then evidence is required from a range of analyses/products.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Value chain	Competitive manufacturing organisations encompass the entire production system, beginning with the <i>customer</i> , and includes the product sales outlet, the final assembler, product design, raw material mining and processing and all tiers of the value chain (sometimes called the supply chain). Any truly 'competitive' system is highly dependent on the demands of its customers and the reliability of its suppliers. No implementation of competitive manufacturing can reach its full potential without including the entire 'enterprise' in its planning.
Value added	Value added is measured against its contribution to the customer benefits/features and may be in the form of: <ul style="list-style-type: none"> • technical benefits/features • location benefits/features • aesthetic benefits/features • information benefits/features.
Just in time (JIT)	Just in time (JIT) is a production scheduling concept that calls for any item needed at a production operation - whether raw material, finished item, or anything in between, to be produced and available precisely when needed, neither a moment earlier nor a moment later.
Waste	Waste (also known as muda in the Toyota Production System and its derivatives) is any activity which does not contribute to customer benefit/features in the product. Within manufacturing, categories of waste include: <ul style="list-style-type: none"> • excess production and early production • delays • movement and transport • poor process design • inventory • inefficient performance of a process

RANGE STATEMENT

	<ul style="list-style-type: none">• making defective items. <p>Waste for this unit may include activities which do not yield any benefit to the organisation or any benefit to the organisations customers.</p>
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Unit Sector(s)

Unit Sector	CM Systems
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMS602A Manage a value chain

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit covers the knowledge and skills needed to manage a value chain, a supply chain or a demand chain, including the close liaison with suppliers and customers and even the managing of the supply/demand chain of smaller suppliers/customers (if they wish it).</p> <p>This unit covers the managing of the supply chain, the demand chain as well as the overall value chain and may be applied to the managing of the chain internally/externally within an organisation.</p>
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Application of the Unit

Application of the unit	<p>In a typical scenario, the person (who may be a manager, technical specialist or similar) needs to manage the value/supply/demand chain on an ongoing basis to achieve the best overall contribution of valued added to their product in terms of customer benefit/features.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	<i>MSACMS601A</i>	<i>Analyse and map a value chain</i>
	<i>MSACMT631A</i>	<i>Undertake value analysis of</i>

Prerequisite units	<i>MSACMS601A</i>	<i>Analyse and map a value chain</i>
		<i>product costs in terms of customer requirements</i>

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Evaluate the value chain	1.1. Identify all members in the value chain for product/s in area of responsibility 1.2. Identify <i>value added</i> by each member of the chain 1.3. Identify acute and chronic issues which impact on the value chain 1.4. Develop priority list of items for improvement
2. Liaise regularly with chain members	2.1. Establish and maintain regular liaison with all chain members 2.2. Identify current and forecast issues with each member 2.3. Work with members to help them address their issues 2.4. Build trust and confidence in the relationship 2.5. Develop a priority list of items for improvement 2.6. Negotiate with all chain members to ensure improvements benefit chain members and improve the benefits/features perceived by the ultimate customer
3. Monitor the value added at each step	3.1. Identify changes in value added by each chain member 3.2. Identify areas where changes to value added are required 3.3. Develop a priority list of items for improvement 3.4. Work with chain member to bring about improvements to value added
4. Continue to reduce waste	4.1. Identify <i>waste</i> in value chain 4.2. Work with chain members to continually reduce waste

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- liaison
- negotiation
- communication
- planning
- basic value analysis

Required knowledge

- purpose of value chain analysis
- methods of value chain analysis
- types of waste and methods of reducing it
- process used to make product
- processes employed by other members of the value chain sufficient to have meaningful dialog with them
- methods of value analysis

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
Overview of assessment requirements	The person will be continuously monitoring the value chain to drive further improvement both in their own organisation and also others in the value chain.
What are the specific resource requirements for this unit?	Access to an organisation following competitive manufacturing.
What critical aspects of evidence are required to demonstrate competency in this unit?	Evidence of ongoing improvements in the value chain should be available, along with the waste reductions which flow from it.
In what context should assessment occur?	Assessment needs to occur in an organisation pursuing competitive manufacturing or by a suitable project or case study.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	This unit could be assessed concurrently with other units related to development and improvements of systems for competitive manufacturing.
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the</p>

EVIDENCE GUIDE	
	assessment.
What evidence is required for demonstration of consistent performance?	Evidence should be from an ongoing monitoring and improvement of the supply chain.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Value chain</p>	<p>Competitive manufacturing organisations encompass the entire supply system, beginning product design, raw material mining and processing and all tiers of the value chain. Any truly 'competitive' system is highly dependent on the demands of its customers and the reliability of its suppliers. No implementation of competitive manufacturing can reach its full potential without including the entire 'enterprise' in its planning.</p>
<p>Value added</p>	<p>Value added is measured against its contribution to the customer benefits/features and may be in the form of:</p> <ul style="list-style-type: none"> • technical benefits/features • location benefits/features • aesthetic benefits/features • information benefits/features.
<p>Waste</p>	<p>Waste (also known as muda in the Toyota Production System and its derivatives) is any activity which does not contribute to customer benefit/features in the product. Within manufacturing, categories of waste include:</p> <ul style="list-style-type: none"> • excess production and early production • delays • movement and transport • poor process design • inventory • inefficient performance of a process • making defective items. <p>Waste for this unit may include activities which do not yield any benefit to the organisation or any benefit to the organisations customers.</p>

Unit Sector(s)

Unit Sector	CM Systems
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMS603A Develop manufacturing related business plans

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills needed to develop business plans in a competitive manufacturing environment.
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Application of the Unit

Application of the unit	<p>In a typical scenario, the person (who may be a production/plant manager, purchasing/technical officer or similar) is required to develop a section business plan to meet the requirements of the overall strategic plan of the organisation. The plan includes the impact on the value chain and other critical competitive manufacturing factors. Due competitive pressures in manufacturing, this may be a reasonably frequent activity and can occur at any time over the business cycle. The plan may be in response to a specific change, or it may be a plan for the next period.</p> <p>This unit primarily requires the application of skills associated with communication in gathering, analysing and applying information and consulting with stakeholders. Problem solving, initiative and enterprise, and planning and organising are required to develop effective and measurable business plan. This unit also requires aspects of self management and learning to ensure feedback and new learning is integrated into competitive manufacturing strategies.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine purpose of plan	1.1. Confirm reason for developing plan and expected outcomes from plan 1.2. Confirm purpose of plan with all relevant stakeholders 1.3. Check expected outcomes from plan with overall strategic plan for organisation 1.4. Identify any potential areas for conflict between proposed plan and strategic directions 1.5. Negotiate with relevant stakeholders to resolve issues
2. Develop objectives and strategies	2.1. Draft objectives for business plan 2.2. Draft strategies to achieve these objectives 2.3. Determine implications for value chain 2.4. Determine capital or workplace layout/organisation implications for objectives and strategies
3. Develop plans to meet objectives and strategies	3.1. Negotiate with relevant stakeholders over implications for objectives and strategies 3.2. In liaison with relevant stakeholders, develop plans to meet objectives 3.3. Determine relevant Key Performance Indicators (KPIs) for plan 3.4. Check Key Performance Indicators (KPIs) are appropriate for purpose of plan 3.5. Check plan will deliver planned purpose 3.6. Map plan to changed value chain 3.7. Adjust plan to optimise value chain 3.8. Validate plan with relevant stakeholders
4. Monitor the implementation of the plan	4.1. Release plan for implementation 4.2. Check the key progress points against the key stages of the plan 4.3. Note any discrepancies 4.4. Take appropriate action to ensure correct implementation of plan

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- planning
- communication
- negotiating
- prioritising
- numeracy/calculation
- problem solving
- organising information

Required knowledge

- knowledge of organisation strategic directions
- planning methods and types of plans
- contingency planning and other risk mitigating planning tools
- the organisation's value chain
- analysis of value chain
- competitive manufacturing practices
- application of quality principles
- human resources and Industrial Relations
- OHS

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
Overview of assessment requirements	The person will be able to develop a plan which successfully delivers plan objectives.
What are the specific resource requirements for this unit?	Access to a workplace implementing competitive manufacturing strategies is required. No other specific resources are required.
What critical aspects of evidence are required to demonstrate competency in this unit?	Evidence of having developed a plan which meets its objectives.
In what context should assessment occur?	Assessment will need to occur in a competitive manufacturing organisation and where the individual is undertaking business planning or by project or case study.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	This unit may be assessed concurrently with appropriate units.
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>

EVIDENCE GUIDE	
What evidence is required for demonstration of consistent performance?	Evidence from one significant plan should be sufficient, or alternatively from several smaller business plans.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Competitive manufacturing</p>	<p>Competitive manufacturing is used to describe the range of systemic manufacturing practice concepts and approaches. It covers but is not limited to:</p> <ul style="list-style-type: none"> • lean manufacturing • agile manufacturing • preventative and predictive maintenance approaches • monitoring and data gathering systems such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Manufacturing Resource Planning (MRP), and proprietary systems such as SAP • statistical process control systems including six sigma and three sigma • Just in Time (JIT), kanban and other pull related manufacturing control systems • supply, value, and demand chain monitoring and analysis • other continuous improvement systems. <p>Competitive manufacturing should be interpreted so as to take into account the stage of implementation of competitive manufacturing approaches, the enterprise's size and work organisation, culture, regulatory environment and manufacturing sector.</p>
<p>Plan</p>	<p>Plan may include any sort of business plan and may emphasise any of the areas for sub-plans over the others.</p>
<p>Objectives</p>	<p>Objectives may include:</p> <ul style="list-style-type: none"> • quality • occupational health and safety (OHS) • environment • competitive manufacturing practices • human, physical, financial and environmental/resource.

RANGE STATEMENT	
Objectives and strategies	Objectives and strategies may include: <ul style="list-style-type: none"> • human and industrial relations • material/component and resources • sustainable environmental practices • sales and marketing • financial.
Relevant stakeholders	Relevant stakeholders may include: <ul style="list-style-type: none"> • other team members • other workers • management • technical specialists • other members of the value chain.

Unit Sector(s)

Unit Sector	CM Systems
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT220A Apply quick changeover procedures

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills needed to do quick changeovers.
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Application of the Unit

Application of the unit	<p>In a typical scenario, an organisation is pursuing quick changeover as one of its competitive manufacturing tools. This unit covers the carrying out of these quick changeovers and also recommending improvements within the scope and authority of the individual's job.</p> <p>Particular technical skills may also be required in some manufacturing sectors and for some jobs. These will be contained in the relevant industry Training Package.</p> <p>This unit requires the application of skills associated with applying quick changeover procedures including the planning and organising of own work, identifying problems and making suggestions for improvement of procedures.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for changeover	1.1. Determine when changeover will be required 1.2. Obtain all required tools/parts/materials for changeover 1.3. Organise process, and tools/parts/materials ready for changeover 1.4. Identify role of others in quick changeover
2. Make quick changeover	2.1. Plan changeover according to quick changeover principles 2.2. Liaise and work with relevant people in quick changeover 2.3. Complete changeover according to <i>procedures</i> 2.4. Check output meets specification 2.5. Debrief with all relevant stakeholders 2.6. Note any steps which cause a problem 2.7. Recommend changes to problematic steps
3. Improve Occupational Health and Safety (OHS)	3.1. Identify hazards to self or others in all steps/actions 3.2. Determine risks from each hazard 3.3. Identify actions which may be performed in a more ergonomic manner 3.4. Recommend changes to improve OHS

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- ability to determine/predict when a changeover will occur
- communication
- teamwork
- appropriate tools/process skills for set-up

Required knowledge

- principles of quick changeover
- relevant procedures
- purposes/requirements of changeover
- methods of recommending changes
- quality requirements for products
- minimisation of changeover scrap

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.	
Overview of assessment requirements	The person will effectively and routinely carry out quick changeovers, in liaison with other relevant personnel, and will make recommendations for improving the changeover.
What are the specific resource requirements for this unit?	Access to an organisation using quick changeovers.
What critical aspects of evidence are required to demonstrate competency in this unit?	Evidence of routine positive participation in quick changeover.
In what context should assessment occur?	Assessment will need to occur in an organisation using quick changeover or a suitable simulation, for example, in a workshop.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	<p>This unit may be assessed concurrently with relevant technical process units.</p> <p>This unit is related to:</p> <ul style="list-style-type: none"> • <i>MSACMT620A Develop quick changeover procedures</i> which covers the manager/design area for quick changeover.
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed</p>

EVIDENCE GUIDE	
	with the assessee prior to the commencement of the assessment.
What evidence is required for demonstration of consistent performance?	Evidence should be available of routinely participating in quick changeovers.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Changeover

Changeover may refer to an exchange of dies/tools (traditional), or a change between batches, or between campaigns. It may be any quantum equipment/process change to produce a different product.

Changeover is sometimes referred to as ***SMED*** which is a more extreme form where SMED is an abbreviation for Single Minute Exchange of Die; literally, changing a die on a forming or stamping machine in a minute or less; broadly, the ability to perform any ***set-up activity*** in a minute or less of machine or process downtime; the key to doing this is frequently the capability to convert ***internal set-up time*** to ***external set-up time***; variations on SMED include:

- Single-digit set-up: performing a set-up activity in a single-digit number of minutes, i.e. fewer than ten.
- OTED: One Touch Exchange of Die; literally, changing a die with one physical motion such as pushing a button; broadly, an extremely simple procedure for performing a set-up activity.

Set-up time - work required to change over a machine or process from one item or operation to the next item or operation ; can be divided into two types:

- ***internal set-up*** work that can be done only when the machine or process is not actively engaged in production; OR
- ***external set-up*** work that can be done concurrently with the machine or process performing production duties.

While the term die is the traditional term, competitive manufacturers who require changeover, but where dies are not used or are less significant, have applied this to a range of other changeovers.

This unit may not be applicable to a totally continuous operation producing only the one product, or

RANGE STATEMENT	
	simultaneous range of products. This is not applicable to a maintenance/ PVI shutdown as experienced by the continuous process manufacturers. However, where there is continuous manufacturing on a campaign basis, it may be applied to the changeover between campaigns or similar changeovers.
Procedures	<p>Procedures include all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, verbal, computer based or in some other form.</p> <p>For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Good Manufacturing Practice (GMP), Responsible Care) and government regulations.</p>

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT221A Apply Just in Time (JIT) procedures

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills needed to work in a JIT system.
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Application of the Unit

Application of the unit	<p>In a typical scenario, a person working in an organisation following JIT will need to follow procedures which are specific to JIT such as the controlled flow of material (eg the use of kanban, and elimination of waste etc). This will involve the operator in the application of the pull system to their job and the authorisation of product/material flows, in accordance with procedures and their level of authority</p> <p>This unit requires the application of skills associated with planning and organising and self management to deliver product on demand using necessary tools, equipment and processes to meet production requirements. The unit also requires an ability to recognise and act on problems that may interfere with meeting production demands.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Respond to indicator of demand	1.1. Identify pull of product through work role 1.2. Recognise indicator of <i>flow authorisation</i> 1.3. Identify production required
2. Make products to demand	2.1. Make product as required by <i>ticket</i> 2.2. Identify any factors likely to prevent demand being satisfied in own work or work of the team 2.3. Take action in accordance with procedures
3. Update demand information as required	3.1. Record information on ticket to procedures as required 3.2. Facilitate operation of flow authorisation as part of work
4. Recommend improvements	4.1. Examine the operation of the JIT system as it relates to own work 4.2. Identify areas for improvement 4.3. Identify any additional personal skill requirements to implement just in time procedures 4.4. Recommend improvements

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- reading
- recording
- communication
- planning
- problem solving

Required knowledge

- relevant flow authorisations, kanban for the job
- JIT methods relevant to job
- procedures for recommending improvements
- technical competence to do the job

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.</p>	
Overview of assessment requirements	The person will work in a JIT system, using it to authorise their own work, facilitating its operation and recommending improvements.
What are the specific resource requirements for this unit?	Access to an organisation using JIT.
What critical aspects of evidence are required to demonstrate competency in this unit?	Evidence of the routine and smooth integration of JIT into their daily work
In what context should assessment occur?	Assessment will need to occur in an organisation using JIT.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	<p>This unit should be assessed concurrently with relevant technical units dealing with the manufacture of product, or other units where JIT is relevant.</p> <p>This unit is related to:</p> <ul style="list-style-type: none"> • <i>MSACMT421A Facilitate a Just in Time (JIT) system, and</i> • <i>MSACMT621A Develop a Just in Time (JIT) system</i> <p>which cover the intermediate and highest skill levels in CM respectively.</p>
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be</p>

EVIDENCE GUIDE	
	<p>available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
What evidence is required for demonstration of consistent performance?	<p>This competency should be a routine part of the job and there should be evidence of it being consistently and routinely applied.</p>

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording in the Performance Criteria is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Just in time (JIT)	Just in time (JIT) is a production scheduling concept that calls for any item needed at a production operation - whether raw material, finished item, or anything in between, to be produced and available precisely when needed, neither a moment earlier nor a moment later.
Flow authorisation	A system which authorises the worker to make a product without reference to another authority.
Indicator of demand	An indicator of demand may be kanban bin, ticket or similar, or may be some other indicator of demand pull. In some plants, this may also include authorisation using SCADA software.
Ticket	A ticket may be a kanban or some other record, paper or electronic which constitutes the whole or part of the flow authorising system. Where kanban bins are used, there may be no other record.
Kanban	<p>Kanban is a card or sheet used to authorize production or movement of an item. When fully implemented, kanban operates according to the following rules:</p> <ul style="list-style-type: none"> • all production and movement of parts and material take place only as required by a downstream operation, ie all manufacturing and procurement are ultimately driven by the requirements of final assembly or the equivalent • the specific tool which authorizes production or movement is called a kanban. The word literally means card or sign, but it can legitimately refer to a container or other authorizing device. Kanban have various formats and content as appropriate for their usage (eg kanban for a vendor is different than a kanban for an internal machining operation). <p>Kanban is typically applied to batch type operation and the production is measured in units produced. In continuous manufacturing organisations, production is</p>

RANGE STATEMENT	
	measured in terms of production rate (eg kg/h, tonne/day) and rate is increased/decreased according to the flow authorisation which may be a kanban (eg ticket, order from a supplier) or may be a SCADA signal from a remote facility (eg customer tank) saying that resupply is required or similar.
SCADA	System Control and Data Acquisition (SCADA) is a general term applied to a number of systems which automatically collect critical process data, perform required mathematical manipulations on it and then make control decisions and/or give required information personnel for action.
Pull system	A pull system is a manufacturing planning system based on making on demand as opposed to a push system based on making for stock using a sales forecast.
Procedures	<p>Procedures include all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, verbal, computer based or in some other form.</p> <p>For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Good Manufacturing Practice (GMP), Responsible Care) and government regulations.</p>

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT230A Apply cost factors to work practices

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills needed for an individual to identify cost components and to be able to determine in general terms the cost impacts of alternative actions.
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Application of the Unit

Application of the unit	<p>In a typical scenario, a person is required to contribute to and be involved in the assessment of cost factors in their work. This may be done individually or in a team environment.</p> <p>The person is able to assess the relative costs of the alternatives and use this as one of the key factors in making decisions. Decisions are made within the scope of the employee's authority and according to procedures. Typical decisions include those that contribute to the efficient organisation of own work and the improvement of production time and cycle times.</p> <p>This unit requires the application of skills associated with problem solving to identify cost factors and cost implications of own work and self management to apply cost effective practices.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify in own work area major cost components of product or process	1.1. Identify <i>cost components</i> in the product or <i>process</i> in own work area 1.2. Recognise the impact of current or alternative actions on costs
2. Identify constraints to cost efficiency	2.1. Identify required production/process rate and major costs 2.2. Identify costs factors under the control of the individual or team 2.3. Relate identified costs factors to impact on <i>overall cost</i> of production/process 2.4. Identify cost factors that are a constraint to cost efficiency in own work area
3. Apply cost efficient work practices	3.1. Express the implications of possible actions/changes to improve cost efficiency in simple financial terms 3.2. Identify non-financial implications of proposed changes in discussion with relevant people 3.3. Select actions which minimise overall costs 3.4. Monitor actions to ensure cost efficiency in own work area is maintained

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- basic numeracy
- problem solving
- communication

Required knowledge

- cost components of products made
- costs concepts such as expense and income
- major cost contributors to product (eg energy)
- the difference between internally and externally controlled costs
- difference between overhead, labour and consumables

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.

<p>Overview of assessment requirements</p>	<p>The person will as part of their routine decision making aim to minimise costs. There should be evidence of their doing so.</p>
<p>What are the specific resource requirements for this unit?</p>	<p>Access to a workplace implementing competitive manufacturing strategies. No other specific resources are required.</p>
<p>What critical aspects of evidence are required to demonstrate competency in this unit?</p>	<p>Evidence of being able to identify costs factors relevant to an individual's job.</p> <p>Evidence of having made appropriate decisions to minimise overall costs.</p>
<p>In what context should assessment occur?</p>	<p>Assessment will need to occur in a workplace or by use of a work based case study.</p>
<p>Are there any other units which could or should be assessed with this unit or which relate directly to this unit?</p>	<p>This unit may be assessed concurrently with appropriate units on continuous improvement.</p>
<p>What method of assessment should apply?</p>	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement</p>

EVIDENCE GUIDE	
	of the assessment.
What evidence is required for demonstration of consistent performance?	Evidence should be available over a period of time or from more than one process or product.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Cost components	Cost components include fixed and variable costs such as power/energy, materials, plant and equipment, production or process time including impact on salary and wages, office expenses such as telephone and government taxes and charges.
Process	Process may include a production, maintenance, logistics or office process in a manufacturing environment.
Overall cost	Overall cost may include the assessment of negative and positive financial implications. It also includes negative long term issues, such as Occupational Health and Safety (OHS), environmental and regulatory issues.

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT240A Apply 5S procedures in a manufacturing environment

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills needed for an employee to apply 5S procedures (a structured approach to housekeeping) to their own job and work area.
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Application of the Unit

Application of the unit	<p>In a typical scenario, an organisation has decided to embark on a competitive manufacturing strategy and as part of this has adopted the philosophy of 5S as one of the tools to move down this path. The employee needs to apply 5S to their job and work area and maintain the housekeeping and other standards set by 5S.</p> <p>This unit requires the application of skills associated with planning and organising, problem solving and self management, in order to identify and implement 5S housekeeping practices.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Sort needed from un-needed	1.1. Identify all <i>items</i> in the work area 1.2. Distinguish between essential and non-essential items 1.3. Place any non-essential item in a appropriate place, not in the work area 1.4. Regularly check that only essential items are in the work area
2. Set the workplace in order	2.1. Identify the best location for each essential item 2.2. Place each essential item in its assigned location 2.3. After use immediately return each essential item to its assigned location 2.4. Regularly check that each essential item is in its assigned location
3. Shine the work area	3.1. Keep the work area clean and tidy at all times 3.2. Conduct regular housekeeping activities during shift 3.3. Ensure the work area is neat, clean and tidy at both beginning and end of shift
4. Standardise activities	4.1. Follow <i>procedures</i> 4.2. Follow checklists for activities where available 4.3. Keep the work area to specified standard
5. Sustain the 5S system	5.1. Clean up after completion of job and before commencing next job or end of shift 5.2. Identify situations where compliance to standards is unlikely and take actions specified in procedures 5.3. Inspect work area regularly for compliance to specified standard 5.4. Recommend improvements to lift the level of compliance in the workplace

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication
- planning
- organising
- prioritising
- reading and interpretation
- recording
- problem solving

Required knowledge

- meaning and application of 5S to their job
- principles of efficient workplace organisation
- purposes of 5S
- procedures relevant to job
- methods of making/recommending improvements

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
Overview of assessment requirements	There should be evidence that the employee is routinely applying 5S principles in their routine work and that they are aware of why 5S is important.
What are the specific resource requirements for this unit?	Access to a plant implementing/practising 5S. No other specific resources re required.
What critical aspects of evidence is required to demonstrate competency in this unit?	Evidence of routine practice of 5S as part of their job.
In what context should assessment occur?	This unit needs to be assessed in a workplace practising, or beginning to implement, 5S.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	<p>This unit could be assessed concurrently with a unit on continuous improvement, or in conjunction with a technical unit related to the process.</p> <p>This unit differs from <i>MSACMT440A Lead 5S in a manufacturing environment</i> which applies to those who also need to help others apply 5S.</p>
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with</p>

EVIDENCE GUIDE	
	the assessee prior to the commencement of the assessment.
What evidence is required for demonstration of consistent performance?	There needs to be evidence that this is a consistent part of their routine work life, and as such, evidence is needed over an extended period.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

5S	<p>5S is a system of work organisation originally developed in Japan based around housekeeping principles.</p> <p>A close translation of the five stages in the housekeeping approach is:</p> <ul style="list-style-type: none"> • sort • set in order • shine • standardise • sustain
Sort	<p>Sort involves keeping only what is absolutely necessary for the production process on the production floor. As a first step, clear the work area of all non-essential equipment and materials. Remove anything either not required to produce the product or adjust the machine during the process. This helps to get rid of a 'just in case' mentality.</p>
Items in work area	<p>Items in work area include tools, jigs/fixtures, materials/components, plant and equipment, manuals, personal items (such as bags, lunch boxes, posters), safety equipment and personal protective equipment, and any other item which happens to be in the work area.</p>
Set in order	<p>After removing unnecessary materials, the remaining materials must be those that are required immediately for either the machine or the job at hand. All of these materials/change/parts etc must have an assigned location on the production floor. Locations should be clearly marked and labelled to show what belongs where.</p>
Shine	<p>The work area should be kept clean at all times. Cleaning must be carried out to a regular daily schedule against allowed time and, on most occasions, at the end</p>

RANGE STATEMENT	
	of a job.
Standardise	Once 5S is established, standardising activities help maintain the order and the housekeeping standards. Standardising may use procedures and checklists developed from a procedure.
Sustain	Sustain means making sure that daily activities are completed every day regardless of circumstance. A job should always be cleaned up once finished regardless of the urgency of the next job. Informal inspections should be done often, at least weekly. Formal inspections of each area should be carried out at least monthly. Specific actions should be followed up. This will generate continuous improvement.
Procedures	Procedures include all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the operation of the plant. They may be written, verbal, computer based or in some other form. For the purposes of CM, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Good Manufacturing Practice (GMP), Responsible Care) and government regulations.

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT250A Monitor process capability

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit covers the knowledge and skills required for gathering of data and the interpretation of simple information to determine the compliance of the process and the taking of action as defined by the procedures where the information reveals the process is out of control parameters.</p>
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Application of the Unit

Application of the unit	<p>In a typical scenario an organisation has adopted either <i>six sigma</i> or statistical process control/ <i>three sigma</i> as a means of determining and improving the capability of their process. The team member is involved in this in collecting specified data and performing specified manipulations to the data (typically by plotting on a chart or by entering into a specified computer program). The information is typically presented to the team member in terms of graphs/charts which they are expected to interpret at a basic level and then take action in accordance with procedures to restore the process to being under control parameters.</p> <p>This unit requires the application of skills associated with entering and monitoring production information and requires initiative, enterprise and problem solving in identifying production variations and making improvement recommendations.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Collect and process data	1.1. Take specified measurements/readings as required 1.2. Enter data onto log/into computer or other record 1.3. Manipulate and/or chart data as required by <i>procedures</i> 1.4.
2. Identify variations that are not random and take action	2.1. Examine chart and/or reliability information 2.2. Distinguish between <i>random variations</i> and those with an identifiable cause 2.3. Take action specified in <i>procedures</i> when a variation with an <i>identifiable cause</i> occurs
3. Assist in process improvement	3.1. Collect data for process capability improvement trials as directed 3.2. Make recommendations for improvement as required 3.3. Implement revised capability monitoring <i>procedures</i> as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- problem solving
- statistical control
- planning
- communication

Required knowledge

- data collection methods
- data processing techniques required
- basic variability and normal distribution
- recognition of identifiable causes in accordance with procedures
- causes of different types of identifiable causes as defined by procedures
- actions to be taken for the different causes

Evidence Guide

<p>EVIDENCE GUIDE</p> <p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
<p>Overview of assessment requirements</p>	<p>The person performing this unit would be expected to collect the correct data at the required frequency, perform the required manipulations on the data and then recognise assignable causes and take the required action (which may just be reporting).</p>
<p>What are the specific resource requirements for this unit?</p>	<p>Access to a work place utilising either 6 sigma or 3 sigma is required. Where it is necessary to use synthetic information for assessment purposes, then a bank of such information should be created.</p>
<p>What critical aspects of evidence are required to demonstrate competency in this unit?</p>	<p>Evidence should be available of data collected and processed. There may also be evidence of assignable causes recognised and action taken. There should not be evidence of assignable causes ignored.</p>
<p>In what context should assessment occur?</p>	<p>Assessment will need to occur in a workplace implementing either 3 sigma or 6 sigma.</p>
<p>Are there any other units which could or should be assessed with this unit or which relate directly to this unit?</p>	<p>This unit may be assessed concurrently with a continuous improvement or a quality unit.</p> <p>This unit is related to:</p> <ul style="list-style-type: none"> • <i>MSACMT450A Undertake process capability improvements</i>, and • <i>MSACMT650A Determine and improve process capability</i> <p>which apply to the intermediate and highest skill levels in CM respectively.</p> <p>It may also be appropriate to relate this unit to <i>MEM15001B Perform basic statistical quality control</i> and possibly also <i>MEM15008B Perform advanced statistical quality control</i> where the person is required to perform statistical manipulations (i.e. where these are not done automatically for the person eg by a computer system).</p>
<p>What method of assessment should apply?</p>	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined</p>

EVIDENCE GUIDE

	<p>by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
<p>What evidence is required for demonstration of consistent performance?</p>	<p>Evidence of the routine collection and processing of data should be available from the workplace. Consistent interpretation of information should also be available from the workplace, although this may need to be supplemented with synthetic data as above. The interpretation of multiple assignable causes is more important than the consistent interpretation of one type of assignable cause.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Six sigma</p>	<p>Six sigma is a process improvement methodology based on statistical process control with six sigma limits which equates to 3.4 defects per million opportunities for each product or service transaction.</p> <p>Six sigma is also often used as a general term covering a competitive manufacturing approach. Six sigma training typically covers several units of competency in this Training Package.</p>
<p>Three sigma</p>	<p>Three sigma includes statistical process control with three sigma limits which equates to 3 defects per thousand opportunities for each product or service transaction.</p>
<p>Procedures</p>	<p>Procedures includes all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, verbal, computer based or in some other form.</p> <p>For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Good Manufacturing Practice (GMP), Responsible Care) and government regulations.</p>
<p>Random variation</p>	<p>Random variation is the term used in statistical control to refer to those variations for which no cause can be found.</p>
<p>Identifiable cause</p>	<p>Also referred to as an 'assignable cause' or a 'special cause' are those variations for which a cause can be found and so the cause of the variation eliminated.</p>

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT251A Apply quality standards

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit is based on <i>LMTQAGN01A Apply quality standards</i>.</p> <p>This unit covers the skills and knowledge required to apply quality standards to work operations in a manufacturing enterprise.</p>
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Application of the Unit

Application of the unit	<p>In a typical scenario, an employee is expected to take responsibility for the quality of their own work, and to take actions specified in the procedures and within the scope of their job and authority to ensure that quality standards are met.</p> <p>This unit requires the application of skills associated with interpreting and applying workplace standards and identifying and addressing problems that interfere with quality outcomes. The unit requires initiative, enterprise and self management to ensure quality standards are achieved.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Assess own work	1.1. Continuously check completed work against workplace standards relevant to the operation being undertaken 1.2. Demonstrate an understanding of how the work activities and completed work relate to the next production process or processes and to the final products concerned 1.3. Identify and isolate faulty pieces/components or final products/batches 1.4. Record and/or report the faults and any identified causes to the supervisor concerned where required in accordance with workplace <i>procedures</i>
2. Assess quality of received component parts/materials	2.1. Continuously check received materials, component parts or final products against workplace standards and specifications for conformance 2.2. Demonstrate an understanding of how the received materials or component parts relate to the current operation and how they contribute to the final quality of the product 2.3. Identify and isolate faulty material or component parts related to the operator's work 2.4. Record and/or report the faults and any identified causes to the supervisor concerned where required, in accordance with workplace procedures 2.5. Identify causes of any identified faults and take corrective action specified in the workplace procedures
3. Measure parts/materials	3.1. <i>Measure</i> materials, component parts or products, as required, using the appropriate measuring instruments in accordance with workplace procedures
4. Record information on production indicator	4.1. Record basic information on the quality and other <i>indicators of production performance</i> in accordance with workplace procedures
5. Investigate causes of quality deviations	5.1. <i>Investigate and report</i> causes of deviations from specified quality standards for materials, component parts or final products, as required, using the appropriate measuring techniques in

ELEMENT	PERFORMANCE CRITERIA
	<p>accordance with workplace procedures</p> <p>5.2.Recommend suitable preventative action based on workplace quality standards and the identified causes of deviations from specified quality standards of materials, component parts or final products</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- interpret work instructions, specifications, standards and patterns appropriate to the assessee's work
- carry out relevant visual inspections of materials, component parts and final products
- carry out relevant physical/chemical measurements or tests
- maintain accurate work records in accordance with procedures
- carry out work in accordance with OHS policies and procedures
- meet work specifications
- communicate effectively within defined workplace procedures
- interpret and apply defined procedures

Required knowledge

- relevant quality standards, policies and procedures
- relevant production processes, materials and products
- basic characteristics of materials used in the relevant production processes
- safety and environmental aspects of relevant production processes
- relevant measurement techniques and quality checking procedures
- workplace procedures
- reporting procedures

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.

<p>Overview of assessment requirements</p>	<p>Competence should be demonstrated in the appropriate work context dependent on the level of responsibility being exercised.</p> <p>Work is assessed in accordance with enterprise quality standards, relevant statutory requirements, organisation insurance requirements, OHS legislation, manual handling procedures and relevant health regulations.</p>
<p>What are the specific resource requirements for this unit?</p>	<p>Access to real or appropriately simulated production situations including areas, materials, equipment, and information on work specifications/patterns, relevant safety procedures and regulations, quality standards, organisation procedures and customer requirements.</p>
<p>What critical aspects of evidence are required to demonstrate competency in this unit?</p>	<p>Assessment must confirm appropriate knowledge and skills to:</p> <ul style="list-style-type: none"> • interpret, relevant work instructions, standards and specifications appropriate to the assessee's work • check and measure the relevant quality parameters • interpret the results of quality checks in terms of specifications, patterns and work standards • take required action where standards of materials, component parts, final product or work processes are found to be unacceptable • maintain accurate records.
<p>In what context should assessment occur?</p>	<p>Assessment may occur on the job or in an appropriately simulated environment.</p>
<p>Are there any other units which could or should be assessed with this unit or which relate directly to this unit?</p>	<p>This unit may be assessed in conjunction with the other relevant units.</p> <p>In some contexts it may be necessary to use specific measuring equipment to check the quality and this may require competence in using that equipment. Where that is the case, it is appropriate to assess this unit in conjunction with that other relevant unit.</p>
<p>What method of assessment should</p>	<p>Assessors must be satisfied that the person can</p>

EVIDENCE GUIDE	
apply?	<p>consistently perform the unit as a whole, as defined by the elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
What evidence is required for demonstration of consistent performance?	<p>Applies underpinning knowledge and skills when:</p> <ul style="list-style-type: none"> • interpreting work instructions, specifications, standards and patterns appropriate to the assessee's work • describing consequences • completing tasks • identifying improvements within defined procedures • applying safety precautions relevant to the task • assessing operational capability of specified equipment used and work processes. <p>Shows evidence of application of relevant workplace procedures including:</p> <ul style="list-style-type: none"> • quality procedures • hazard policies and procedures including codes of practice relevant to their job within defined procedures • job procedures and work instructions • waste, pollution and recycling management processes within defined procedures • action taken promptly, accidents and incidents reported in accordance with statutory requirements and enterprise procedures • recognises and adapts appropriately to cultural

EVIDENCE GUIDE	
	<p>differences in the workplace, including modes of behaviour and interactions among staff and others in accordance with workplace procedures</p> <ul style="list-style-type: none"> • work completed systematically with attention to detail without damage to goods, equipment or personnel.
What evidence is required for demonstration of consistent performance?	<p>Applies underpinning knowledge and skills when:</p> <ul style="list-style-type: none"> • interpreting work instructions, specifications, standards and patterns appropriate to the assessee's work • describing consequences • completing tasks • identifying improvements within defined procedures • applying safety precautions relevant to the task • assessing operational capability of specified equipment used and work processes. <p>Shows evidence of application of relevant workplace procedures including:</p> <ul style="list-style-type: none"> • quality procedures • hazard policies and procedures including codes of practice relevant to their job within defined procedures • job procedures and work instructions • waste, pollution and recycling management processes within defined procedures • action taken promptly, accidents and incidents reported in accordance with statutory requirements and enterprise procedures • recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among staff and others in accordance with workplace procedures • work completed systematically with attention to detail without damage to goods, equipment or personnel.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Work site environment	Work may be conducted in a large scale production or small business situation.
Quality parameters	Quality parameters may include: <ul style="list-style-type: none"> • finish • size • durability • product variations • materials • alignment • colour • damage and imperfections.
Quality checks	Quality checks may include: <ul style="list-style-type: none"> • visual inspection • physical measurements • chemical tests • checks against patterns, templates and guides.
Measure	Measure includes those measurements which may be taken by the employee in the work place/at their work station.
Procedures	Procedures include all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the operation of the plant. They may be written, verbal, computer based or in some other form. For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Good Manufacturing Practice (GMP), Responsible Care) and government regulations.
Indicators of production	Indicators of production performance include things like

RANGE STATEMENT	
performance	number of items/production rate, delays and causes of delays (where known) and other information as specified in the procedures.
Data entry/recording	Data entry/recording may include: <ul style="list-style-type: none"> • keyboard • written (including ticks or signs) • verbal.
Sources of information/documents	Sources of information/documents may include: <ul style="list-style-type: none"> • quality and Australian standards and procedures • work instructions, patterns, designs and recipes • organisation work procedures • manufacturer instructions for materials and equipment • organisational or external personnel • customer requirements.
Investigate and report	Investigate and report in this unit is used to mean following set procedures defined for such investigations. These procedures could include verbal instructions, documented procedures or other quality procedures as implemented within an enterprise or work environment.
Workplace context	Work organisation procedures and practices relating to the manufacture and quality outcomes for products. Conditions of service, legislation and industrial agreements including: <ul style="list-style-type: none"> • workplace agreements and awards • Federal or State/Territory legislation • standard work practice.
Reporting/communication	Reporting/communication may include verbal and written communication in accordance with organisational policies and procedures. Communication may be oral, written or visual and can include simple data.
Being responsible for the maintenance of own work quality	Being responsible for the maintenance of own work quality may include being required to contribute to the quality improvement of team or section output, where necessary, in accordance with workplace procedures. Safety, environmental, housekeeping and quality are as

RANGE STATEMENT	
	specified by materials/machine/equipment manufacturers, regulatory authorities and the enterprise.
Applicable regulations and legislation	Applicable regulations and legislation may include: <ul style="list-style-type: none"> • Occupational Health and Safety (OHS) legislation relevant to workplace activities • workers' compensation legislation.

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT260A Use planning software systems in manufacturing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills needed to access planning software (often known as ERP, MRP, MRPII, and often by its brand name, such as SAP) to make routine business decisions required of the person as a regular part of their job.
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Application of the Unit

Application of the unit	<p>In a typical scenario, an organisation has introduced a planning software system which the employees now must interface with. At its simplest level this is just an information system. However when fully implemented the <i>planning software</i> system can be used as a tool for decision making.</p> <p>This unit requires the application of communication, planning, and problem solving associated with using planning software in own work.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Use interface	1.1. Use keyboards, track ball/mouse and monitor and/or other peripherals to access system 1.2. Navigate through the system and the screens 1.3. Acknowledge messages 1.4. Input and output information in the required format
2. Access information	2.1. Obtain relevant data and information from the system 2.2. Identify the status of items in the <i>value chain</i> 2.3. Access historical data and information 2.4. Interpret information and prioritise actions
3. Take appropriate actions in accordance with procedures	3.1. Take actions in response to information 3.2. Follow up as appropriate to ensure anticipated results have occurred 3.3. Record adjustments and variations according to procedures 3.4. Identify any learning needs to use planning software and seek appropriate support

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- keyboarding/mousing
- communication
- teamwork
- problem solving

Required knowledge

- technical knowledge and skills needed to operate process
- hierarchy of planning software system and operation
- information available from and business activities exercised by/through the planning software system

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.	
Overview of assessment requirements	The employee will routinely use the relevant parts of the planning software system for their job.
What are the specific resource requirements for this unit?	Access to an organisation using a planning software system.
What critical aspects of evidence are required to demonstrate competency in this unit?	Evidence of routine use of planning software as part of their job is required.
In what context should assessment occur?	Assessment needs to occur in a workplace using a planning software system or a simulation system.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	<p>This unit should be assessed concurrently with relevant technical units for the process.</p> <p>This unit covers the lower skill levels of using planning software. <i>MSACMT460A Use planning software systems in manufacturing</i> and <i>MSACMT660A Develop the application of enterprise systems in manufacturing</i> cover the intermediate and highest skill levels in the CM respectively.</p>
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the</p>

EVIDENCE GUIDE	
	assessment.
What evidence is required for demonstration of consistent performance?	Evidence of routine use over an extended period should be available. Planning software systems will typically log all interactions with it. Interrogation of the planning software system will therefore provide evidence of the operator's use of it. Actions taken may also be accessible from the planning software system itself, or may need other evidence available from the process.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Planning software	Planning software is a general term applied to a number of software systems which integrate a range of business information such as finance, logistics maintenance and production. It is frequently referred to by names such as ERP, SAP, MRP/MRP II.
Value chain	Competitive manufacturing organisations encompass the entire production system, beginning with the customer, and includes the product sales outlet, the final assembler, product design, raw material mining and processing and all tiers of the <i>value chain</i> (sometimes called the supply chain). Any truly 'competitive' system is highly dependent on the demands of its customers and the reliability of its suppliers. No implementation of competitive manufacturing can reach its full potential without including the entire 'enterprise' in its planning.
Procedures	Procedures includes all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, verbal, computer based or in some other form. For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Good Manufacturing Practice (GMP), Responsible Care) and government regulations.

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT261A Use SCADA systems in manufacturing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills needed by an employee to interact with a System Control and Data Acquisition (SCADA) system as part of their job.
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Application of the Unit

Application of the unit	<p>In a typical scenario, an organisation has introduced a SCADA system which employees now must interface with. The employee will need to access this system as part of their routine and take actions based on the information they get from the SCADA system in accordance with procedures.</p> <p>This unit requires the application of skills associated with using communication tools and technology for management of own work, planning and problem solving.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Use operator interface	1.1. Use keyboards, track ball, monitor and/or stand alone controllers to access/interrogate system 1.2. Find all relevant screens and information 1.3. Acknowledge messages 1.4. Input and output information
2. Use information	2.1. Obtain data and information from the SCADA as required, including process, <i>supply</i> and <i>product</i> chain data 2.2. Interpret data and information as required by own job 2.3. Find and use relevant historical data and information 2.4. Use manufacturer manuals or specifications as required to expand knowledge of SCADA system relevant to own work 2.5. Determine and prioritise required actions
3. Make required changes in accordance with procedures	3.1. Adjust production/process in response to SCADA information 3.2. Record adjustments and variations to specifications/ schedules and report to appropriate personnel 3.3. Seek feedback and information on adjustments to further improve procedures where required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- keyboarding/mousing
- communication
- teamwork
- problem solving

Required knowledge

- technical knowledge and skills needed to operate process
- hierarchy of SCADA system and operation
- information available from and controls exercised by/through the SCADA system

Evidence Guide

<p>EVIDENCE GUIDE</p> <p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
<p>Overview of assessment requirements</p>	<p>The employee will routinely use the relevant parts of the SCADA system for their job.</p>
<p>What are the specific resource requirements for this unit?</p>	<p>Access to an organisation using a SCADA system.</p>
<p>What critical aspects of evidence are required to demonstrate competency in this unit?</p>	<p>Evidence of routine use of SCADA as part of their job is required.</p>
<p>In what context should assessment occur?</p>	<p>Assessment needs to occur in a workplace using a SCADA system or using a SCADA simulation program.</p>
<p>Are there any other units which could or should be assessed with this unit or which relate directly to this unit?</p>	<p>This unit should be assessed concurrently with relevant technical units for the process.</p> <p>This unit covers the lowest skill level aspects of SCADA. <i>MSACMT461A Facilitate SCADA systems in manufacturing team or work area</i> and <i>MSACMT660A Develop the application of enterprise systems in manufacturing</i> cover the intermediate and highest skill levels of SCADA in CM respectively.</p>
<p>What method of assessment should apply?</p>	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which</p>

EVIDENCE GUIDE	
	<p>would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
What evidence is required for demonstration of consistent performance?	<p>Evidence of routine use over an extended period should be available. SCADA systems will typically log all interactions with it. Interrogation of the SCADA system will therefore provide evidence of the operator's use of it. Actions taken may also be accessible from the SCADA system itself, or may need other evidence available from the process.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

System Control and Data Acquisition (SCADA)

System Control and Data Acquisition (SCADA) is a general term applied to a number of systems which automatically collect critical process data, perform required mathematical manipulations on it and then make control decisions and/or give required information to personnel for action.

In the continuous manufacturing sector, the SCADA system is sometimes integrated into other sophisticated computer control systems such as Distributed Control System (DCS) and indeed these systems do merge in advanced systems. These organisations may simply refer to their SCADA as the DCS or other similar term (such as the proprietary name of the computer system).

SCADA systems may provide information from outside of the process, such as stock/material levels in a customer plant and/or available supply, supply rates and pricing from a supplier plant. This information may all be accessed by the SCADA system and the employee using it in order to make production rate and other control decisions (either automatically or human assisted) about their own process.

Supply and product chains

The supply chain is all suppliers in the chain from the initial raw material up to the current step in the manufacturing process.

The product chain is all steps after the current step up to the final customer.

Competitive manufacturing organisations encompass the entire production system, beginning with the customer, and includes the product sales outlet, the final assembler, product design, raw material mining and processing and all tiers of the value chain (sometimes called the supply chain). Any truly 'competitive' system is highly dependent on the demands of its customers and the reliability of its suppliers. No implementation of competitive manufacturing can reach its full potential

RANGE STATEMENT	
	without including the entire 'enterprise' in its planning.
Procedures	<p>Procedures include all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, verbal, computer based or in some other form.</p> <p>For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Good Manufacturing Practice (GMP), Responsible Care) and government regulations.</p>

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT270A Use sustainable energy practices

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills needed to use and make improvements in sustainable energy practices in production, maintenance and logistics.
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Application of the Unit

Application of the unit	<p>In a typical scenario, a team member will be aware of energy use. Some of this energy use is necessary but typically a large part of energy use is <i>unnecessary waste</i> and so should be eliminated. The team member will observe energy use and ensure it is according to the organisation's plans and will also engage in continuous improvement for energy use.</p> <p>This unit requires the application of skills associated with interpreting workplace information on energy use and using procedures and technology to minimise energy use and waste.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify energy use	1.1. Identify energy consuming processes in relation to own work 1.2. Recognise the type/source of <i>energy</i> consumed
2. Follow energy conservation plans	2.1. Check energy use in accordance with conservation plans 2.2. Identify most efficient or appropriate equipment or procedures to comply with conservation plans 2.3. Identify any uses which do not comply with conservation plans 2.4. Take action in accordance with procedures to bring energy use back in line with conservation plans
3. Improve energy use	3.1. Note any waste of energy use 3.2. Recommend improvements to energy use

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analysis
- basic mathematics
- communication
- problem solving

Required knowledge

- types and sources of energy relevant to the process
- basic principles of energy efficiency
- process needs for energy

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
Overview of assessment requirements	The team member will be able to identify the energy use of any/all parts of the process and recommend better ways of using it.
What are the specific resource requirements for this unit?	Access to an organisation seeking to improve its energy usage.
What critical aspects of evidence are required to demonstrate competency in this unit?	Evidence of conformance to energy usage plans and suggestions for improvement should be available.
In what context should assessment occur?	Assessment needs to be conducted in an organisation where energy is a significant cost component or by use of a project, simulation or case study.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	<p>This unit is related to:</p> <ul style="list-style-type: none"> • <i>MSACMT271A Use sustainable environmental practices</i> - which covers general environmental practices, and • <i>MSACMT670A Develop and manage sustainable energy practices</i> - which covers higher level aspects.
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the</p>

EVIDENCE GUIDE	
	assessment.
What evidence is required for demonstration of consistent performance?	Evidence should be available from the daily routine of the job to show that there is consistent performance.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Waste</p>	<p>Waste (also known as muda in the Toyota Production System and its derivatives) is any activity which does not contribute to customer benefit/features in the product. Within manufacturing, categories of waste include:</p> <ul style="list-style-type: none"> • excess production and early production • delays • movement and transport • poor process design • inventory • inefficient performance of a process • making defective items. <p>Waste for this unit may include activities which do not yield any benefit to the organisation or any benefit to the organisations customers.</p>
<p>Energy</p>	<p>Energy is used to mean all sources of energy used by the process be it electricity, gas or mobile transport fuel. The uses of the energy will also be potentially wide and include heating and cooling, lighting, moving materials (including pumps and conveyors), modifying materials (including cutting, forming, weaving, knitting, reacting, moulding, extruding, mixing), generating pressure/vacuum or providing motive power for equipment and transport.</p>

Unit Sector(s)

<p>Unit Sector</p>	<p>CM Tools</p>
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT271A Use sustainable environmental practices

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills needed to use and make improvements in sustainable environmental practices in production, maintenance and logistics.
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Application of the Unit

Application of the unit	<p>In a typical scenario, a team member will be aware of <i>environmental resource</i> use. Some of this is <i>necessary</i> but typically a large part of environmental resource use may be <i>unnecessary waste</i> and so should be eliminated or at least minimised. The team member will observe resource use and ensure it is according to the organisations plans and will also engage in continuous improvements for resource use.</p> <p>This unit requires the application of skills associated with applying workplace information on use of resources and managing own application of technology and workplace practices to minimise use and waste of resources.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify resource use	1.1. Identify resources used by processes in area of responsibility 1.2. Recognise the type/source of resource used 1.3. Identify sources of information to expand knowledge and understanding of resources used
2. Comply with environmental obligations	2.1. Follow procedures to ensure there is no breach of environmental regulations/licence conditions 2.2. Identify situations related to job which may lead to a breach of regulations/licence conditions
3. Follow resource conservation plans	3.1. Identify resource conservation plan/section of plan relevant to area of responsibility 3.2. Identify most efficient or appropriate equipment or processes to comply with conservation plans 3.3. Check resource use is in accordance with plan 3.4. Sort/recycle waste according to procedures 3.5. Note any uses which do not comply with plan 3.6. Take appropriate action specified in plan to bring resource use back in line with plans 3.7. Apply energy conservation plans to the use of equipment and tools
4. Improve resource use	4.1. Identify waste of resource use 4.2. Recommend improvements to resource use

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analysis
- basic mathematics
- communication
- problem solving

Required knowledge

- the '3 Rs' - reduce, re-use, recycle
- regulatory/licensing requirements relevant to the process/plant
- types and sources of resource
- basic principles of resource efficiency
- process needs for resource

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
Overview of assessment requirements	The competent team member will be able to identify the resource use of any/all part/s of the process and recommend better ways of using it.
What are the specific resource requirements for this unit?	Access to an organisation seeking to improve its resource usage.
What critical aspects of evidence are required to demonstrate competency in this unit?	Evidence of conformance to resource usage plans and suggestions for improvement should be available.
In what context should assessment occur?	Assessment needs to be conducted in an organisation where resource is a significant cost component or by project, simulation or case study.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	<p>This unit is related to:</p> <ul style="list-style-type: none"> • <i>MSACMT270A Use sustainable energy practices - which covers energy specifically, and</i> • <i>MSACMT671A Develop and manage sustainable environmental practices - which covers the higher skill levels.</i>
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed</p>

EVIDENCE GUIDE	
	with the assessee prior to the commencement of the assessment.
What evidence is required for demonstration of consistent performance?	Evidence should be available from the daily routine of the job to show that there is consistent performance.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Waste</p>	<p>Waste (also known as muda in the Toyota Production System and its derivatives) is any activity which does not contribute to customer benefit/features in the product.</p> <p>Within manufacturing, categories of waste include:</p> <ul style="list-style-type: none"> • excess production and early production • delays • movement and transport • poor process design • inventory • inefficient performance of a process • making defective items. <p>Waste for this unit may include activities which do not yield any benefit to the organisation or any benefit to the organisations customers.</p>
<p>Necessary waste</p>	<p>Necessary waste is any activity or cost which does not contribute directly to customer benefit/feature in the product, and which cannot be avoided (for example regulatory compliance and fixed costs). Necessary waste cannot be eliminated but should be managed.</p>
<p>Unnecessary waste</p>	<p>Unnecessary waste is any activity or cost which does not contribute directly to customer benefit/features in the product and can be avoided. Unnecessary waste should be eliminated as quickly as practical.</p>
<p>Resource</p>	<p>Resource is used to mean resources used by the process be it raw materials, components, process water, cooling water, cleaning water and so on.</p>
<p>Recognise</p>	<p>Recognition of type of resource is at an appropriate level for the person and the area and includes things like recognising steam/electric heating, cooling water/refrigerated cooling, raw materials waste</p>

RANGE STATEMENT	
	materials.

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT280A Undertake root cause analysis

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit covers the knowledge and skills needed to undertake root cause analysis (RCA) by any person. This will often be done by people working in a team. This unit also covers the competencies needed by operators to contribute to an advanced maintenance strategy using RCA coupled with diagrams and charts.</p>
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Application of the Unit

Application of the unit	<p>In a typical scenario, the employee works in an organisation which is applying competitive manufacturing strategies. This involves the operator 'owning' their process, taking responsibility for it, undertaking root cause analysis of problems and generally contributing to increasing the <i>uptime</i> and general <i>Overall Equipment Efficiency (OEE)</i>.</p> <p>This unit requires an ability to seek and apply information from a variety of sources in order to inform problem solving analyses. Initiative and enterprise is also required to identify quick fix and permanent solutions to problems.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Recognise problems	1.1. Identify equipment/plant characteristics indicative of a problem 1.2. Identify process conditions/product characteristics indicative of a problem 1.3. Use appropriate techniques/charts to define the problem
2. Implement quick fix	2.1. Recommend/implement a quick fix within the scope of competency and authority 2.2. Use technology or processes relevant to the problem to implement quick fix
3. Determine root cause	3.1. Identify a range of possible causes 3.2. Gather information to eliminate/confirm causes 3.3. Construct a cause and effect diagram from available data 3.4. Seek assistance as required 3.5. Identify root cause
4. Develop permanent solution	4.1. Identify a range of methods of eliminating the root cause/ breaking the <i>cause tree</i> 4.2. Select the most appropriate solution 4.3. Liaise with relevant people 4.4. Recommend or implement solution within the limits of competency and authority 4.5. Monitor impact of solution and make further recommendations as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- analysis
- problem solving
- communication
- documenting

Required knowledge

- root cause analysis methodology
- indicators of a problem
- principles of the process sufficient to undertake a RCA and propose solutions
- use of relevant analysis tools (eg cause/effect diagrams, Pareto charts, 4W)

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide describes the underpinning knowledge and skills that must be demonstrated to prove competence. It is essential for assessment and must be read in conjunction with the performance criteria, the range statement and the assessment guidelines of the relevant training package

Overview of assessment requirements	The competent operator will be able to recognise problems in their process and undertake a root cause analysis, either alone or with assistance and propose permanent solutions.
What are the specific resource requirements for this unit?	Access to an organisation using root cause analysis.
What critical aspects of evidence are required to demonstrate competency in this unit?	Evidence of root cause analyses undertaken should be available.
In what context should assessment occur?	Assessment will need to occur in an organisation implementing root cause analysis or by simulation or project.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	<p>This unit could be assessed concurrently with other units dealing with the improvement of the process.</p> <p>This unit could be co-assessed (and delivered) with:</p> <ul style="list-style-type: none"> • <i>MSAPMSUP390A Use structured problem solving tools</i> • <i>MEM15001B Perform basic statistical quality control.</i> <p>This unit is related to <i>MSACMT281A Implement a predictive maintenance strategy</i> as root cause analysis is one tool used in predictive maintenance.</p>
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include</p>

EVIDENCE GUIDE	
	<p>direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
What evidence is required for demonstration of consistent performance?	Generally a range of root cause analysis activities will be required in order to generate sufficient evidence.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Root cause	<p>There are many possible causes of any problem. Eliminating some will have no impact, others will ameliorate the problem. However, elimination of the root cause will eliminate the problem. There should only be one root cause for any problem and so the analysis should continue until this one cause is found. Elimination of the root cause permanently eliminates the problem.</p>
Cause tree	<p>The series of causes is referred to as the cause tree. Not all root causes are accessible and able to be eliminated. Breaking the cause tree in such a way that the problem cannot recur is an acceptable alternative.</p> <p>Not all situations can wait for the <i>root cause analysis</i> and eventual elimination of the root cause as there are serious current impacts. The <i>quick fix</i> will control these immediate impacts, but does not eliminate the root cause.</p>
Uptime	<p>Uptime refers to the overall availability of the plant - it is the inverse of downtime - or the unavailability of the plant. Ideal uptime is 100%.</p>
Appropriate techniques/charts	<p>Appropriate techniques/charts may include the following:</p> <ul style="list-style-type: none"> • control charts • Pareto charts • run charts • flow charts • cause and effect diagrams • tree diagrams • 4W analysis.
Overall Equipment Efficiency (OEE)	<p>Overall Equipment Efficiency (OEE) is the combination of the main factors causing loss of productive capacity from equipment/plant and is:</p>

RANGE STATEMENT

	<p><i>OEE = availability x performance x quality rate</i></p> <p>where:</p> <ul style="list-style-type: none"> • availability takes into account losses due to breakdown, set up and adjustments • performance takes into account losses due to minor stoppages, reduced speed and idling • quality rate takes into account losses due to rejects, re-works and start up waste.
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Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT281A Contribute to the application of a proactive maintenance strategy

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills required to make a positive contribution to proactive maintenance strategies which include things like plant uptime and Overall Equipment Efficiency (OEE).
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Application of the Unit

Application of the unit	<p>In a typical scenario, an organisation is following a predictive, preventative or reliability centred maintenance strategy and this requires commitment from all employees. The employee should 'own' their equipment/plant and take an active part in the implementation of the strategy within the scope of their authority.</p> <p>This unit requires the application of skills associated with accessing and maintaining equipment/plant documentation, It also requires problem solving and initiative and enterprise to continually monitor and maintain operational performance of equipment/plant used in work role.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Maintain equipment/ plant	1.1. Keep equipment/plant within area of responsibility clean 1.2. Ensure equipment/plant is serviced and adjusted as required in accordance with <i>procedures</i> and own level of responsibility 1.3. Access manufacturer manuals/specifications where required to expand knowledge on the maintenance of equipment/plant 1.4. Access and update documentation on equipment/plant operation and maintenance as appropriate to workplace procedures
2. Monitor operation of equipment/plant	2.1. Regularly check key conditions of the equipment/plant as defined in the procedures 2.2. Regularly check equipment/plant Overall Equipment Efficiency (OEE) 2.3. Note any deviation from conditions specified in procedures 2.4. Identify any previous occurrences of this deviation
3. Identify deviations and patterns	3.1. Identify any previous occurrences of a deviation 3.2. Identify any related deviations which have occurred 3.3. Identify any unusual occurrence which may be related to a deviation
4. Take action appropriate to competency and authority on deviation	4.1. Liaise with relevant people regarding the deviation and the solution 4.2. Implement solution/assist with the implementation of the solution as appropriate

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- mathematical literacy
- analysis
- problem solving
- communication

Required knowledge

- normal behaviour of the equipment/plant
- indicators of abnormal performance
- principles of operation sufficient to recognise problems and propose solutions
- appropriate cleaning and adjusting for the equipment/plant/area as required by procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
Overview of assessment requirements	The employee should 'own' their plant/equipment and take a lead role in ensuring that it is always operating in peak condition and with high and increasing OEE.
What are the specific resource requirements for this unit?	Access to a plant using a proactive maintenance strategy.
What critical aspects of evidence are required to demonstrate competency in this unit?	There should be evidence of deviations recognised and appropriate solutions implemented.
In what context should assessment occur?	Assessment needs to occur in an organisation using a predictive maintenance strategy.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	<p>This unit may be assessed concurrently with other units dealing with maintenance.</p> <p>This unit is related to:</p> <ul style="list-style-type: none"> • <i>MSACMT280A Undertake root cause analysis which is one of the analysis tools, and</i> also to • <i>MSACMT481A Undertake proactive maintenance analyses, and</i> • <i>MSACMT681A Develop a proactive maintenance strategy</i> <p>which cover the intermediate and high skill levels respectively.</p>
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures,</p>

EVIDENCE GUIDE	
	<p>information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
What evidence is required for demonstration of consistent performance?	Evidence should be required from a range of activities indicating that the maintenance and monitoring elements are a routine part of the job and that the identification of patterns and taking action has occurred in a range of situations.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Uptime	Uptime refers to the overall availability of the plant - it is the inverse of downtime or the unavailability of the plant. Ideal uptime is 100%.
Overall Equipment Efficiency (OEE)	<p>Overall Equipment Efficiency (OEE) is the combination of the main factors causing loss of productive capacity from equipment/plant and is:</p> <p><i>OEE = availability x performance x quality rate</i></p> <p>where:</p> <ul style="list-style-type: none"> • availability takes into account losses due to breakdown, set up and adjustments • performance takes into account losses due to minor stoppages, reduced speed and idling • quality rate takes into account t losses due to rejects, re-works and start up waste.
Procedures	<p>Procedures include all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, verbal, computer based or in some other form.</p> <p>For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Good Manufacturing Practice (GMP), Responsible Care) and government regulations.</p>

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT430A Improve cost factors in work practices

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills needed to evaluate the product or process outcomes of a team in terms of their cost components and to be able to determine in general terms the cost impacts of alternative actions.
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Application of the Unit

Application of the unit	<p>In a typical scenario, a person is able to assess the relative costs of alternatives and use this as one of the key factors in decision making. Typical decisions include the efficient organisation of work within a team and the improvement of throughput and cycle times.</p> <p>Decisions are made within the scope of the team's authority and according to procedures</p> <p>This unit primarily requires the application of skills associated with communication and information gathering, teamwork and problem solving to analyse the cost components of team processes. Initiative, enterprise, planning and organising are also required identify opportunities for improved cost efficiency. This unit also requires a degree of self management and learning to effectively operate and maintain skills and performance.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse cost components of team's function	1.1. Identify <i>cost components</i> in the product or <i>process</i> 1.2. Identify costs factors under control of the team 1.3. Identify causes of variability in costs 1.4. Analyse impact of costs on production or process activities undertaken by team
2. Improve cost efficiency of team processes	2.1. Identify methods of improving productivity and/or reducing costs within team's area of responsibility 2.2. Determine cost/ <i>benefit</i> ratio of alternative methods improving productivity and/or reducing costs 2.3. Consult with all relevant stakeholders regarding possible changes 2.4. Recommend changes which will increase productivity and reduce cost and variability 2.5. Implement recommended changes in consultation with relevant stakeholders

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit.
Required skills:
<ul style="list-style-type: none"> • basic numeracy.
Required knowledge:
<ul style="list-style-type: none"> • cost components of products made • costs concepts such as expense, income and cost benefit • major cost contributors to product (e.g. energy) • the difference between internally and externally controlled costs • difference between overhead, labour and consumables.

Evidence Guide

<p>EVIDENCE GUIDE</p> <p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
<p>Overview of assessment requirements</p>	<p>The person will as part of their routine decision making aim to maximise the cost efficiency of their work team within their scope of authority. There should be evidence of their doing so.</p>
<p>What critical aspects of evidence are required to demonstrate competency in this unit?</p>	<p>Evidence of routinely analysing cost factors relevant to their team's operation and implementing improvements to the team's cost efficiency.</p>
<p>In what context should assessment occur?</p>	<p>Assessment will need to occur in a workplace or by use of a work based case study.</p>
<p>Are there any other units which could or should be assessed with this unit or which relate directly to this unit?</p>	<p>This unit may be assessed concurrently with appropriate units on continuous improvement.</p>
<p>What method of assessment should apply?</p>	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the elements, performance criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
<p>What evidence is required for demonstration of consistent</p>	<p>Evidence should be available over a period of time or from more than one process or product.</p>

EVIDENCE GUIDE	
performance?	
What are the specific resource requirements for this unit?	Access to a workplace implementing competitive manufacturing strategies. No other specific resources are required.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Cost components	<p>Cost components may include fixed and variable costs such as power/energy, materials, plant and equipment, salary and wages, office expenses such as telephone, and government taxes and charges.</p>
Process	<p>Process may include a production, maintenance, logistics or office process in a manufacturing environment.</p>
Procedures	<p>Procedures include all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, verbal, computer based or in some other form.</p> <p>For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (e.g. Good Manufacturing Practice (GMP), Responsible Care) and government regulations.</p>
Benefits	<p>Benefits should include positive benefits as well as negative benefits such as quality, safety, reliability and similar issues which may be impacted by a cost saving.</p>

Unit Sector(s)

Unit Sector	CM Tools
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corequisite units

Corequisite units	
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Functional area

Functional Area	
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MSACMT450A Undertake process capability improvements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills required by a team leader/technical expert to analyse data from the process, develop improvements to eliminate variation due to assignable causes and then implement actions.
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Application of the Unit

Application of the unit	<p>In a typical scenario, a person reviews a range of process capability data and information, makes some changes/arranges for changes to be made to <i>procedures</i>, equipment or process and then recalculates the process capability. Process capability may have been determined using either a <i>six sigma (6?)</i> or <i>three sigma (3?)</i> process.</p> <p>This unit primarily requires the application of skills associated with communication, information gathering and analysis. Initiative, enterprise and problem solving are also required to identify opportunities to improve process capacity. This unit also requires aspects of self management and learning to validate own analysis.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	<i>MSACMT452A</i>	<i>Apply statistics to processes in manufacturing</i>
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Obtain required data	1.1. Identify process for study 1.2. Obtain/organise to obtain required data/information
2. Analyse information	2.1. Analyse past data and determine assignable causes 2.2. Develop possible improvements to eliminate assignable causes 2.3. Incorporate own experience and learning into proposed process improvements
3. Improve process capability	3.1. Liaise with relevant people to implement improvements 3.2. Obtain required authorities to implement improvements 3.3. Obtain/organise to obtain required data for improved process 3.4. Recalculate process capability 3.5. Implement revised data collection/processing and new capability information

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills:

- mathematical
- statistical methods
- communication
- negotiation
- planning
- analysis
- problem solving
- teamwork
- computer operation.

Required knowledge:

- data collection methods
- data processing techniques required
- variability and normal distribution
- three sigma or six sigma processes as relevant
- random and non-random results - recognition of assignable causes
- causes of different types of non-random results
- causes of random variation
- process understanding sufficient to translate the data into variations in the process and determine methods of controlling them.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.	
Overview of assessment requirements	The person should be able to analyse a process and recalculate process capability/trial limits after changes have been made.
What critical aspects of evidence are required to demonstrate competency in this unit?	Evidence should be available of the analysis of process information and the recalculation of process capability/trial limits. The improvements made may be as a result of continuous improvement with the process capability being recalculated periodically, or the improvement may be as a result of an improvement project with the process capability recalculated as part of that project.
In what context should assessment occur?	Assessment may occur in an organisation which uses process capability to monitor its process and as a tool for improving its process or may occur using a specific project/projects to improve process capability.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	<p>This unit may be assessed concurrently with a continuous improvement unit.</p> <p>This unit is related to:</p> <ul style="list-style-type: none"> • <i>MSACMT250A Monitor process capability</i>, and • <i>MSACMT650A Determine and improve process capability</i> which apply to the lower and higher skill levels in CM respectively. <p>It may also be appropriate to relate this unit to <i>MEM15008B Perform advanced statistical quality control</i> where the person is required to perform statistical manipulations (i.e. where these are not done automatically for the operator e.g. by a computer system).</p>
What method of assessment should apply?	Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the elements, performance criteria, skills and knowledge. A holistic approach should be taken to the assessment.

EVIDENCE GUIDE	
	<p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
What evidence is required for demonstration of consistent performance?	<p>This should normally be a routine part of the team leader's job. Where improvements result from a continuous improvement/kaizen process, then a few rounds of improvement and capability recalculation should be required as evidence of competence. Where the improvements results from an improvement project, and this is a complex project and includes the recalculation and implementation of the revised process capability, then one project may be provide sufficient evidence.</p>
What are the specific resource requirements for this unit?	<p>Access to an organisation using process capability to control and improve its process.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Six sigma (6s)	Six sigma is a statistical tool for recording defects and determining capability. Six sigma limits equate to 3.4 defects per million opportunities for each product or service transaction. Six sigma is also used as a general term covering a competitive manufacturing approach. Six sigma training typically covers several units of competency in this Training Package.
Three sigma (3s)	Traditional statistical process control uses three sigma limits which equates to 3 defects per thousand opportunities for each product or service transaction.
Procedures	Procedures include all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, verbal, computer based or in some other form. For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (e.g. Good Manufacturing Practice (GMP), Responsible Care) and government regulations.

Unit Sector(s)

Unit Sector	CM Tools
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corequisite units

Corequisite units	
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Functional area

Functional Area	
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MSACMT452A Apply statistics to processes in manufacturing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills required to apply statistical theory and principles to the analysis and control of processes in manufacturing.
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Application of the Unit

Application of the unit	<p>In a typical scenario, statistical process control is being used on a process in a manufacturing organisation. Usually this will be to monitor the process and determine when action needs to be taken. The appropriate action will then be taken in accordance with standard procedures.</p> <p>To do this the person will apply their knowledge of frequency distribution and variation to the data/chart to distinguish between random and non-random variation and their understanding of the process and/or equipment to help interpret those results.</p> <p>This unit primarily requires the application of skills associated with gathering and analysing data and communicating statistical information to others. This unit also has a strong emphasis on problem solving, initiative and enterprise, planning and organising, and self management to solve problems and manage processes.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Collect process data.	1.1. Interpret sampling scheme 1.2. Obtain measurements in accordance with standard procedures 1.3. Handle data as required.
2. Interpret data	2.1. Plot data on appropriate control chart 2.2. Distinguish between random and non-random patterns of results 2.3. Identify results outside the control limits 2.4. Recognise situations requiring action 2.5. Take appropriate action in accordance with standard procedures 2.6. Determine cost of non-conformance
3. Calculate control limits.	3.1. Consult relevant stakeholders to determine appropriate limits 3.2. Use relevant methods to calculate/revise control limits 3.3. Plot limits on control chart 3.4. Explain impact of limit to relevant stakeholders

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills:

- analysis
- problem solving
- communication
- documenting
- calculations
- use of statistics

Required knowledge:

- sampling techniques
- purpose of sampling and measurement
- random, systematic, stratified sampling
- relevance, reliability and representativeness of samples/data collected
- purpose of replication of data for statistical control
- samples, populations, finite and infinite populations and the differences
- methods of calculating means, standard deviations and the like and their purpose in statistical control
- the causes of variation in a process
- the meaning of broad/ narrow frequency distributions/ range/standard deviations and skewed distributions in process terms
- types of control charts and their applications to different types of process/product and for different purposes
- process causes of variation and typical cause types of non-random variation
- non-process (eg measurement) causes of variation
- recognition of stable and unstable processes
- causes of stability/instability in the process
- calculation of control limits/process capability and the applications of different control limits
- the standard distribution curve and confidence limits.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide describes the underpinning knowledge and skills that must be demonstrated to prove competence. It is essential for assessment and must be read conjunction with the performance criteria, the range statement and the assessment guidelines of the relevant Training Package

Overview of assessment requirements	The competent person will be able to apply statistical theory to a process to interpret and reduce its variation.
What critical aspects of evidence is required to demonstrate competency in this unit?	Evidence of the application of statistical theory to a process should be available
In what context should assessment occur?	Assessment will need to occur in an organisation implementing statistical process control or by project.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	This unit could be assessed concurrently with other units dealing with process capability and/or change management.
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the elements, performance criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of</p>

EVIDENCE GUIDE	
What evidence is required for demonstration of consistent performance?	Generally the application of statistics over a period of time would be required to generate sufficient evidence
What are the specific resource requirements for this unit?	Access to an organisation using statistical control.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Sampling scheme	Sampling scheme may include: <ul style="list-style-type: none"> • sampling for attributes or sampling for variables • batch, continuous or custom made products • number of items/samples • size of sample • timing of sampling • location of sampling points • type of sample • number/type of measurements to be done on each sample • sampling equipment • measurement/testing equipment/methods
Procedures	Procedures includes all work instructions, standard operating procedures, formulas/ recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, verbal, computer based or in some other form. For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Good Manufacturing Practice (GMP), Responsible Care) and government regulations.
Handle data	Handle data may include: <ul style="list-style-type: none"> • calculating means, ranges, mean of means, standard deviation (using appropriate calculation aids) • entering data into a software package • recording data either in writing or electronically • other required manipulations of the data.
Control chart	Control charts may include: <ul style="list-style-type: none"> • run • tally

RANGE STATEMENT	
	<ul style="list-style-type: none"> • mean/range • attributes • other relevant charts
Random	Random variation is the term used in statistical control to refer to those variations for which no cause can be found.
Non-random	Non-random, also called identifiable cause, or assignable cause or special cause are those variations for which a cause can be found and so the cause of the variation eliminated. Non-random variation may also be used to predict possible breaches of the control limits.
Control limits	Control limits, also referred to as process capability are those limits within which the process will operate if it is 'under control'.
Cost of non-conformance	<p>Cost of non-conformance includes:</p> <ul style="list-style-type: none"> • reprocessing/rework • expediting • unplanned service • excess inventory • complaint handline • downtime • returns • scrap • labour costs • material costs • infrastructure costs/overhead • utility costs
Appropriate limits	<p>Appropriate limits may include:</p> <ul style="list-style-type: none"> • 1 sigma warning limits • 2 sigma warning limits • 3 sigma control limits • 6 sigma limits

Unit Sector(s)

Unit Sector	CM Tools
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corequisite units

Corequisite units	
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Functional area

Functional Area	
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MSACMT630A Optimise cost of product

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills needed to take a global view of the costs of a product and determines methods of reducing costs overall.
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Application of the Unit

Application of the unit	<p>In a typical scenario, a product is selected and analysed by its cost components to determine the best method of lowering the cost overall. This unit differs from <i>MSACMT631A Undertake value analysis of product costs in terms of customer requirements</i> in that it looks at all costs and takes a holistic approach to the cost of the product.</p> <p>This unit primarily requires the application of skills associated with communication in gathering, analysing and applying information. Problem solving, initiative and enterprise, and planning and organising are required to calculate cost components and determine cost optimisation strategies. This unit also requires aspects of self management and learning to ensure feedback and new learning is integrated into costing methods.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	<i>MSACMT631A</i>	<i>Undertake value analysis of product costs in terms of customer requirements</i>
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse total cost components of product	1.1. Identify all cost components of product 1.2. Allocate cost components to major categories such as overhead, depreciation, energy, consumables and labour 1.3. Distinguish between costs which directly deliver customer features/benefits and <i>waste</i>
2. Optimise costs	2.1. Analyse causes of costs which lead to customer features/benefit 2.2. Determine methods of increasing the customer benefit/cost ratio 2.3. Analyse causes of waste costs 2.4. Determine methods of reducing/eliminating waste costs 2.5. Analyse interactions between cost components 2.6. Check that one method of reducing costs does not cause an increase in another cost/reduction in consumer benefit 2.7. Check that cost reduction plans do not reduce required levels of regulatory compliance or Occupational Health and Safety (OHS)
3. Implement cost optimisation	3.1. Develop cost optimisation plans 3.2. Negotiate with relevant people to agree on implementation plans 3.3. Take actions to implement the cost optimisation 3.4. Monitor the implementation of the cost optimisation 3.5. Make adjustments to the plan as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- calculation
- analysis
- problem solving
- planning

Required knowledge

- cost components of product
- major costs which are controllable (and how to control them)
- types of waste
- interrelationship of cost components and costs and benefits

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
Overview of assessment requirements	The person will select a product to analyse and determine cost components. Costs will be identified as waste or otherwise as an aid to determining their treatment. The cost reduction plans will optimise the cost of the product overall in terms of benefit delivered.
What are the specific resource requirements for this unit?	Access to a workplace implementing competitive manufacturing strategies. No other specific resources are required.
In what context should assessment occur?	Assessment will need to occur in a workplace.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	This unit may be assessed concurrently with appropriate units on continuous improvement/kaizen.
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
What evidence is required for demonstration of consistent performance?	Evidence from a single optimisation may be adequate, although generally analyses of a few products with different cost structures or customer benefit structures would be

EVIDENCE GUIDE	
	required.

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Waste	<p>Waste (also known as muda in the Toyota Production System and its derivatives) is any activity which does not contribute to customer benefit/features in the product. Within manufacturing, categories of waste include:</p> <ul style="list-style-type: none"> • excess production and early production • delays • movement and transport • poor process design • inventory • inefficient performance of a process • making defective items. <p>Waste for this unit may include activities which do not yield any benefit to the organisation or any benefit to the organisations customers.</p>

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT631A Undertake value analysis of product costs in terms of customer requirements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This unit covers the knowledge and skills required by an employee who is required to analyse products and processes to determine the factors that most impact on meeting customer requirements. The analysis is in terms of cost factors and include options for improving cost efficiency. The unit also includes implementing identified changes that increase cost efficiency. The unit may be applied individually or in a team environment.</p> <p>In this unit an employee uses an analysis of the benefits/features which a customer perceives to be in a product/products as a basis for determining waste and so reducing waste.</p>
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Application of the Unit

Application of the unit	<p>In a typical scenario, an employee will choose a product, analyse the features/benefits obtained by customers from this product and the cost components relating to those benefits. From this waste will be determined and actions taken to reduce waste.</p> <p>This unit primarily requires the application of skills associated with communication in gathering, analysing and applying information. Problem solving, initiative and enterprise, and planning and organising are required to determine cost efficiencies. This unit also requires aspects of self management and learning to ensure feedback and new learning is integrated into costing methods.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	<i>MSACMT230A</i>	<i>Apply cost factors to work practices</i>
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse customer benefits and determine waste	1.1. Determine features/benefits perceived by customer in product 1.2. Analyse cost components and determine those which deliver customer features/benefits and those which don't 1.3. Analyse waste cost components 1.4. Determine alternative ways of reducing waste costs 1.5. Select actions which maximise customer benefits and minimise costs
2. Analyse production performance variance	2.1. Analyse required performance to meet customer <i>pull</i> 2.2. Determine actual <i>cycle time</i> /s and variability of cycle time 2.3. Analyse cause of waste in throughput 2.4. Analyse costs and determine methods of reducing costs/waste 2.5. Take actions required to achieve cost/waste reduction/s

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- calculation
- communication
- problem solving
- analysis
- numeracy
- literacy
- planning and organising

Required knowledge

- customer benefits from products
- performance and cycle times for products made
- major costs which are controllable (and how to control them)
- types of waste (muda)
- methods of reducing waste (muda)
- methods of reducing cycle time
- desirability of improving performance and methods of reducing cycle time

Evidence Guide

<p>EVIDENCE GUIDE</p> <p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
<p>Overview of assessment requirements</p>	<p>The employee will select a product/range of products to analyse and determine waste in terms of any cost which does not contribute directly to an identified customer benefit/feature and then proceed to determine and implement methods of reducing this waste.</p>
<p>What are the specific resource requirements for this unit?</p>	<p>Access to a workplace implementing competitive manufacturing strategies. No other specific resources are required.</p>
<p>In what context should assessment occur?</p>	<p>Assessment will need to occur in a workplace.</p>
<p>Are there any other units which could or should be assessed with this unit or which relate directly to this unit?</p>	<p>This unit may be assessed concurrently with appropriate units on continuous improvement/kaizen.</p>
<p>What method of assessment should apply?</p>	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>

EVIDENCE GUIDE	
What evidence is required for demonstration of consistent performance?	Evidence should be available from a number of minor changes or from a single large change which had multiple facets and which was implemented over a period of months.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Waste	<p>Waste (also known as muda in the Toyota Production System and its derivatives) is any activity which does not contribute to customer benefit/features in the product.</p> <p>Within manufacturing, categories of waste include:</p> <ul style="list-style-type: none"> • excess production and early production • delays • movement and transport • poor process design • inventory • inefficient performance of a process • making defective items. <p>Waste for this unit may include activities which do not yield any benefit to the organisation or any benefit to the organisations customers.</p>
Performance	Performance may be thought of as the rate of output of the plant compared to the rate required to meet demand.
Cycle time	Cycle time is the normal time to complete an operation on a product.
Pull	Pull is the concept of producing to demand, rather than for stock or some forecast.

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT650A Determine and improve process capability

Modification History

Not applicable.

Unit Descriptor

<p>Unit descriptor</p>	<p>This unit covers the knowledge and skills needed to determine the actual (as distinct from design) capability of a process and then to analyse that process to remove assignable causes and reduce random causes. This would typically be done by a manager or technical expert support person either working in a team, or in close liaison with key stakeholders. Process capability is typically calculated using standard deviations.</p>
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Application of the Unit

<p>Application of the unit</p>	<p>In a typical scenario a person (who may be a production manager, plant/process engineer, technical specialist or similar) will be responsible for developing plans to improve process capability and following agreement the implementation of the plans to improve process capability. The organisation may use either a 6 sigma or 3 sigma process.</p> <p>This unit primarily requires the application of skills associated with communication in gathering and analysing data and consulting with relevant personnel. Teamwork, problem solving, initiative and enterprise, and planning and organising are required to determine causes to variations and implement solutions. This is done in an environment using computer technology and also requires aspects of self management and learning to ensure feedback and new learning is integrated into process improvements.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	<i>MSACMT452A</i>	<i>Apply statistics to processes in manufacturing</i>
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Employability Skills Information

Employability skills	This unit contains employability skills
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Obtain data for process capability study	1.1. Identify the process requiring capability analysis 1.2. Obtain process capability data
2. Analyse data	2.1. Identify assignable causes of variation in liaison with relevant personnel 2.2. Develop solutions to eliminate variation due to assignable causes in liaison with relevant people 2.3. Analyse random variations for possible causes in liaison with relevant people 2.4. Confirm cause/s of random variation 2.5. Develop solutions to reduce random variations in liaison with relevant people
3. Take action to improve process capability	3.1. Develop plans to implement solutions 3.2. Liaise with relevant people to implement solutions 3.3. Gain necessary approvals as required 3.4. Monitor implementation and make adjustments as required 3.5. Determine new/revised process capability 3.6. Implement revised process capability regime

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- mathematical
- statistical methods
- communication
- negotiation
- planning
- analysis
- problem solving
- teamwork
- computer operation

Required knowledge

- data collection methods
- data processing techniques required
- variability and normal distribution
- three sigma or six sigma processes as relevant
- random and non-random results - recognition of assignable causes
- causes of different types of non-random results
- causes of random variation
- process understanding sufficient to translate the data into variations in the process and determine methods of controlling them

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
Overview of assessment requirements	The person should be able to implement and review a process capability system and make improvements to the process using process capability as a tool.
What are the specific resource requirements for this unit?	Access to an organisation using process capability.
In what context should assessment occur?	Assessment needs to occur in an organisation using process capability as a tool for process monitoring and improvement. It may also be assessed using a suitable project.
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	<p>This unit is related to:</p> <ul style="list-style-type: none"> • <i>MSACMT250A Monitor process capability</i>, and • <i>MSACMT450A Undertake process capability improvements</i> <p>which cover the lowest and intermediate skill levels in CM respectively.</p>
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
What evidence is required	One complex project, or several simpler projects will be

EVIDENCE GUIDE	
for demonstration of consistent performance?	needed to gain sufficient evidence.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Six sigma	<p>Six sigma is a statistical tool for recording defects and determining capability which equates to only 3.4 defects per million opportunities for each product or service transaction.</p> <p>Six sigma is also used as a general term covering a competitive manufacturing approach. Six sigma training typically covers several units of competency in this Training Package.</p>
Three sigma	<p>Traditional statistical process control uses three sigma limits which equates to 3 defects per thousand opportunities for each product or service transaction.</p>
Procedures	<p>Procedures includes all work instructions, standard operating procedures, formulas/recipes, batch sheets, temporary instructions and similar instructions provided for the smooth running of the plant. They may be written, verbal, computer based or in some other form.</p> <p>For the purposes of this Training Package, 'procedures' also includes good operating practice as may be defined by industry codes of practice (eg Good Manufacturing Practice (GMP), Responsible Care) and government regulations.</p>

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT661A Determine and establish information collection requirements and processes

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the knowledge and skills required to determine what information is needed to support decision making in a competitive manufacturing environment and then to set about establishing required information collection systems. This would usually be done as part of a team and would require consultation with all key stakeholders.
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Application of the Unit

Application of the unit	<p>This unit covers the determination of data needs and collection methods for a manufacturing organisation or specific plant or process. This will typically be done in liaison with a wide range of people, each of whom will have their own specific information requirements. There will need to be balanced and interpreted into a workable set of data to be collected.</p> <p>This unit primarily requires the application of communication and problem solving skills associated with determining information requirements and processes of information collection. Initiative and enterprise, and planning and organising are also required to ensure information targets specific factors. This unit also requires aspects of self management and learning to ensure feedback and new learning is integrated into the development of processes.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Analyse decision to be made	1.1. Identify person/s to be included in the analysis process 1.2. Determine the consequences of the decision in liaison with relevant people 1.3. Determine the variables which can be controlled 1.4. Determine the variables which cannot be controlled 1.5. Determine the consequences of a change in these variables in liaison with affected person/s
2. Define the factors which cause the variables to change	2.1. Identify factors which are able to be controlled 2.2. Identify factors which are not able to be controlled 2.3. Identify means of measuring these factors, or indicators for the values of these factors 2.4. Compile a list of measurements/indicators required. 2.5. Communicate with team members and involve them in development of factors and changes to ensure awareness and facilitate learning
3. Develop data collection protocols	3.1. Determine methods of making measurements 3.2. Determine methods of quantifying indicators 3.3. Determine the benefit/cost of automated (or other) collection of this data
4. Develop systems to produce required information	4.1. Identify user of information and their needs and abilities 4.2. Determine data processing needs to produce required information 4.3. Determine information distribution channels 4.4. Determine skill development need for recipients of information 4.5. Implement systems to produce information 4.6. Monitor implementation and make adjustments as required

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication
- analysis
- problem solving
- negotiation
- mathematics
- teamwork
- planning and organising

Required knowledge

- business needs of the organisation/section
- information needs of individuals within the organisation
- possible data available/potentially available to the organisation
- relationship between data available and information required
- methods of converting data into useful information

Evidence Guide

<p>EVIDENCE GUIDE</p> <p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
<p>Overview of assessment requirements</p>	<p>The person will be able to determine information and data requirements for any activity, and, in liaison with others, implement the collection of the data and distribution of the information.</p>
<p>What are the specific resource requirements for this unit?</p>	<p>Access to an organisation which makes conscious decisions about its information needs.</p>
<p>In what context should assessment occur?</p>	<p>Assessment will need to occur in an organisation which makes conscious decisions about its information needs.</p>
<p>Are there any other units which could or should be assessed with this unit or which relate directly to this unit?</p>	<p>There are no related units. Concurrent assessment may be undertaken with appropriate units.</p>
<p>What method of assessment should apply?</p>	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
<p>What evidence is required for demonstration of consistent</p>	<p>Where evidence is provided from ongoing changes to the information requirements, then a range of</p>

EVIDENCE GUIDE	
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performance?	changes will be needed to provide sufficient evidence. Where evidence is provided from a complex information requirements project, then a single project may provide sufficient evidence.
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Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Determining data needs

This unit is focused more on those decisions which are non-routine and so need specific collection of data, or for those decisions which are routine, the establishment of a routine data collection protocol to allow for the decisions to be made based on appropriate, reliable data.

Competitive manufacturing

Competitive manufacturing is used to describe the range of systemic manufacturing practice concepts and approaches. It covers but is not limited to:

- lean manufacturing
- agile manufacturing
- preventative and predictive maintenance approaches
- monitoring and data gathering systems such as Systems Control and Data Acquisition (SCADA) software, Enterprise Resource Planning (ERP) systems, Manufacturing Resource Planning (MRP), and proprietary systems such as SAP
- statistical process control systems, including six sigma and three sigma
- Just in Time (JIT), kanban and other pull related manufacturing control systems
- supply, value, and demand chain monitoring and analysis
- other continuous improvement systems.

Competitive manufacturing should be interpreted so as to take into account the stage of implementation of competitive manufacturing approaches, the enterprise's size and work organisation, culture, regulatory environment and manufacturing sector.

Decision

This unit potentially applies to all organisations that are pursuing competitive manufacturing.

A decision can be a change, improvement, new/alterred process or system which requires data in order to monitor it or where data is required to make a decision

RANGE STATEMENT	
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	regarding the selection of alternatives.
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Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSACMT675A Facilitate the development of a new product

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This competency covers the knowledge and skills required to develop a new/evolutionary product within an existing range of products and encompasses design for manufacture and the facilitation of its initial production. This unit is based on <i>PMBTECH601A Develop a new product</i>
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Application of the Unit

<p>Application of the unit</p>	<p>This competency applies to people who develop new products to meet a specified end use. This will involve working closely with a range of management and operations personnel and requires balancing the business and technical sides of the new product and would typically be done as part of a cross functional team. This unit of competency applies to the technical expert. Critical aspects for success include:</p> <ul style="list-style-type: none"> • ensuring the technical performance meets the customer's needs • making sure the market needs of cost, timeliness and quality are appropriately balanced • designing a product and process which can be efficiently made by the company • liaising with the required people to ensure tooling design and manufacture and equipment modification is correct • optimising the process for the new product at the completion of the development phase. <p>This competency is typically performed by high level staff, working as part of a product design, development and implementation team and taking a lead technical role.</p> <p>This unit primarily requires the application of skills associated with communication in gathering, analysing and applying information and consulting with stakeholders. Team work, problem solving, initiative and enterprise, and planning and organising are required to facilitate the development of a new product. This unit also requires aspects of self management and learning to ensure feedback and new learning is integrated into competitive manufacturing strategies.</p> <p>This unit of competency assumes the knowledge component included in the following unit of competency. Evidence must be available that the specified knowledge has been acquired and is able to be applied: <i>MSACMT452 Apply statistics to processes in manufacturing</i></p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	<i>MSACMT452 Apply statistics to processes in manufacturing</i>
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Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance Criteria describe the performance needed to demonstrate achievement of the Element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Confirm design brief of new product in consultation with relevant people	1.1. Communicate with customer and other key stakeholders and agree on technical specification, aesthetic requirements, timelines, cost and other market requirements 1.2. Determine regulatory/industry code/intellectual property requirements for product 1.3. Identify possible <i>tooling/process/equipment</i> needs 1.4. Develop design brief, including relevant drawings, to meet needs 1.5. Obtain 'sign off' on total design brief from all relevant persons
2. Determine material requirements for product	2.1. Select appropriate materials/combination of materials/ components in liaison with key stakeholders 2.2. Determine material/component testing and evaluation regime required to meet product end use requirements, including <i>regulatory</i> /industry code requirements 2.3. Arrange for, testing and evaluation of trial materials/ components 2.4. Guide material trial process and interpret material trial results 2.5. Determine final materials/components specifications and details of value chain
3. Determine process requirements for product	3.1. Select appropriate process to make product in liaison with key stakeholders and based on <i>relevant factors</i> 3.2. Determine any special process/equipment requirements for this product 3.3. Communicate with production personnel to determine their concerns and/or training or other needs 3.4. Adjust the design as required to satisfy customer and production needs
4. Ensure process needs for new product have been met	4.1. Liaise with equipment design/procurement personnel 4.2. Interpret hardware specifications and ensure they are appropriate for the job required 4.3. Liaise with process personnel to ensure

ELEMENT	PERFORMANCE CRITERIA
	<p>appropriate draft procedures for new product have been developed</p> <p>4.4. Validate product cost and design meets objectives</p>
5. Trial new product through the process	<p>5.1. Design trialing procedure to deliver required information</p> <p>5.2. Liaise with relevant stakeholders</p> <p>5.3. Ensure health safety and environment (HSE) requirements are stringently observed</p> <p>5.4. Coordinate the trialing of the new product</p> <p>5.5. Interpret product trial results and guide product trial process</p> <p>5.6. Tune process to optimise production of new product</p>
6. Determine process capability	<p>6.1. Plot appropriate statistical process control charts</p> <p>6.2. Determine confidence limits</p> <p>6.3. Compare confidence limits with product specification</p>
7. Coordinate product trials	<p>7.1. Determine product testing and evaluation regime required to meet end use requirements, including regulatory/industry code requirements</p> <p>7.2. Arrange for testing and evaluation of trial product/prototype</p> <p>7.3. Interpret product trial results and guide product trial process</p> <p>7.4. Determine final product specification in liaison with key stakeholders</p> <p>7.5. Make required changes to materials, process and equipment</p>
8. Implement standard procedures for new product	<p>8.1. Monitor initial production and, in liaison with appropriate team members, adjust process, conditions and materials to ensure the product and process outcomes conform to requirements</p> <p>8.2. Ensure process specifications are updated and reflect the optimised operation developed</p> <p>8.3. Ensure standard operating procedures are correct for the new product</p> <p>8.4. Ensure equipment and other hardware records are updated to reflect additions/changes</p> <p>8.5. Ensure project records are complete and all required reports have been completed and</p>

ELEMENT	PERFORMANCE CRITERIA
	submitted 8.6. Archive records according to company procedure

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Competence includes the ability for the practical completion of the job to:

- select and justify the selection of:
 - type of material/material specification
 - appropriate process for a range of product/market applications
 - material and product testing procedures
- apply theoretical principles to predict:
 - properties of product based on materials selected
 - effects of processes and processing on the final properties of the product
- mathematically determine:
 - product cost estimates
- interpret and make recommendations based on:
 - field test results
 - market analysis data
 - trailing data.

Required knowledge

- Knowledge and understanding of the materials, equipment and process sufficient to choose an appropriate combination of materials and process to achieve the end use function of the product.
- Knowledge of the enterprise's procedures and relevant regulatory requirements along with the ability to implement them within appropriate time constraints and work standards.

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.</p>	
Overview of assessment requirements	There should be evidence of successfully designed products.
What are the specific resource requirements for this unit?	Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.
What critical aspects of evidence are required to demonstrate competency in this unit?	The critical aspect for this unit of competency is the ability to apply a thorough understanding of materials and components, their grades and properties and the effects of processing to a new situation and use this understanding to predict likely solutions to the new product design specification challenge. This understanding of material/component and process interactions should also be able to be applied in interpreting data and making adjustments to materials/components and process to achieve the desired outcomes.
Language, literacy and numeracy requirements:	This unit requires high levels of numeracy and literacy with the ability to write and interpret technical specifications and reports. Advanced numeracy allowing the calculation and interpretation of statistics, product formulae and process conditions is also required.
In what context should assessment occur?	<p>Competence in this unit may be assessed:</p> <ul style="list-style-type: none"> • by observation of an actual product development project where the assessee takes a lead technical role • by use of a suitable product development project where arrangements are made to also assess the implementation aspects. <p>The development must be of a product which is new to the organisation and not just a modification of an existing product. It is possible that a major redesign of an existing product may encompass all the aspects of a new product design to an appropriate breadth and depth. Where the only available product design projects are the major redesign of an existing project, normally several such projects will be required to</p>

EVIDENCE GUIDE	
	<p>match the breadth and depth of skills which can be demonstrated by the development of a totally new product.</p> <p>In all cases it is expected that practical assessment will be supported by targeted questioning to assess the underpinning knowledge and theoretical assessment will be supported by appropriate practical/simulation or similar assessment.</p>
Are there any other units which could or should be assessed with this unit or which relate directly to this unit?	This unit may be assessed with other relevant units.
What method of assessment should apply?	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria, skills and knowledge. A holistic approach should be taken to the assessment.</p> <p>Assessors should gather sufficient, fair, valid, reliable, authentic and current evidence from a range of sources. Sources of evidence may include direct observation, reports from supervisors, peers and colleagues, project work, samples, organisation records and questioning. Assessment should not require language, literacy or numeracy skills beyond those required for the unit.</p> <p>The assessee will have access to all techniques, procedures, information, resources and aids which would normally be available in the workplace.</p> <p>The method of assessment should be discussed and agreed with the assessee prior to the commencement of the assessment.</p>
What evidence is required for demonstration of consistent performance?	Evidence from one major product design or a number of product improvements should be available.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

<p>Processes and policies</p>	<p>This competency unit is for the design of a new product 'from scratch'. It assumes an understanding of the operation of all relevant equipment and processes but does not necessarily require them to be used personally.</p> <p>The competency assumes a working knowledge of all main processes and materials so that an informed choice can be made between them.</p> <p>All operations are performed in accordance with standard procedures and policies.</p>
<p>Tools and equipment include</p>	<ul style="list-style-type: none"> • understanding of use of all standard processing equipment • relevant personal protective equipment.
<p>Typical regulatory requirements include:</p>	<ul style="list-style-type: none"> • Occupational Health and Safety (OHS) • environmental regulations • structural codes • product/industry specific requirements.
<p>Typical problems include:</p>	<ul style="list-style-type: none"> • defining product end use requirements in terms meaningful to the product design and manufacture • matching suitable materials and processes to the product needs and company expertise and facilities • matching (and improving) process capability to product tolerances.
<p>Relevant factors may include:</p>	<ul style="list-style-type: none"> • type of material • dimensional precision of product • length of run/number of products • required aesthetics • size and complexity of product • available capital funding • process equipment available • HSE.

Unit Sector(s)

Unit Sector	CM Tools
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Co-requisite units

Co-requisite units	
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Functional area

Functional Area	
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MSAENV272B Participate in environmentally sustainable work practices

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This competency covers the outcomes required to effectively measure current resource use and carry out improvements including those reducing negative environmental impacts of work practices.</p> <p>This unit is based on the sustainability guideline standard GCSSUS01A Participate in environmentally sustainable work practices.</p>
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Application of the Unit

Application of the unit	<p>This competency applies to operators/team members who are required to follow procedures so as to work in an environmentally sustainable manner. This ensures regulatory compliance and also aims at minimising environmental risks and maximises the environmental performance of the process and the organisation.</p> <p>It includes:</p> <ul style="list-style-type: none"> • Resources used • Potential environmental hazards • Improving environmental performance (within scope of competency and authority). <p>This competency applies to all sectors of the manufacturing industry and members of its value chain. It may also be applied to all sections of an organisation, including office, warehouse etc. This unit will need to be appropriately contextualised as it is applied across an organisation and across different industry sectors.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	This unit has no prerequisites	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify current resource use and environmental issues.	1.1. Identify workplace <i>environmental and resource efficiency issues</i> . 1.2. Identify resources used in own work role. 1.3. <i>Measure</i> and record current usage of resources using <i>appropriate techniques</i> . 1.4. Identify and report workplace environmental hazards to appropriate personnel.
2. Comply with environmental regulations.	2.1. Follow <i>procedures</i> to ensure <i>compliance</i> . 2.2. Report environmental incidents to appropriate personnel.
3. Seek opportunities to improve environmental practices and resource efficiency.	3.1. Follow <i>enterprise plans</i> to improve environmental practices and resource efficiency. 3.2. Make <i>suggestions</i> for improvements to workplace practices in own work area.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include the ability to:

- report as required by procedures
- follow procedures and instructions and respond to change
- ask questions and seek clarifications relating to work requirements

Reading and writing is required in order to interpret required procedures and complete required workplace forms/reports.

Numeracy is required to interpret numeric workplace information, readings and measurements, handle data as required and complete numeric components of workplace forms/reports.

Required knowledge

Competency includes sufficient knowledge to:

- have a basic understanding of sustainability
- know the environmental hazards/risks, resource use and inefficiencies associated with own workplace (at an appropriate level)
- know the relevant environmental and resource efficiency systems and procedures for own work area
- know the impact of laws and regulations to a level relevant to the work context

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

A person who demonstrates competence in this unit must be able to provide evidence of the ability to follow workplace procedures according to instructions given and to participate in the improvement of environmental and resource efficient work practices at own level of responsibility. Evidence must be strictly relevant to the particular workplace role.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to:

- identify and measure resources used in their job
- identify situations likely to lead to an environmental incident
- follow procedures related to environmental performance.

Consistent performance should be demonstrated. For example, look to see that:

- work is routinely to procedures
- the minimum of resources is used consistent with the job requirements, good practice and the procedures.

Context of and specific resources for assessment

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

Depending on the selected methods of assessment access may be required to:

- workplace procedures and plans
- documentation in relation to production, waste, overheads, hazard control/management
- reports from supervisors/managers
- case study/scenarios

Method of assessment

A holistic approach should be taken to the assessment.

Competence in this unit may be assessed:

- by demonstration in the workplace

EVIDENCE GUIDE	
	<ul style="list-style-type: none"> • using targeted questioning for appropriate portions • by use of a suitable simulation and/or a range of case studies/scenarios • by a combination of these techniques. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment.</p>
Guidance information for assessment	Assessors need to be aware of any cultural issues that may affect responses to questions. Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Procedures

All operations are performed in accordance with procedures including all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Environmental and resource efficiency issues

Environmental and resource efficiency issues include minimisation of environmental risks and maximisation of opportunities to improve business environmental performance and to promote more efficient production and consumption of natural resources, for example by:

- minimisation of waste, through implementation of the waste management hierarchy
- efficient and effective use of energy and other resources
- seeking alternative sources of energy
- efficient use of materials and appropriate disposal of waste
- use of controls to minimise the risk of environmental damage from hazardous substances
- efficient water use
- reducing emissions
- life cycle analysis applied to issues such as energy supply, materials, transport, production

Measure

Measure should be interpreted in a manner consistent with the scope of the job and may include things like:

- counting the number of items entering/leaving a work area
- reading indicators in the work area
- obtaining relevant information from support

RANGE STATEMENT	
	<p>personnel</p> <ul style="list-style-type: none"> • other simple means
Appropriate techniques	<p>Appropriate techniques include:</p> <ul style="list-style-type: none"> • material fed to/consumed by plant/equipment • plant meters and gauges • job cards including kanbans • examination of invoices from suppliers • measurements made under different conditions • examination of relevant information and data.
Compliance	<p>Compliance includes meeting relevant federal, state and local government laws, by-laws, regulations and mandated codes of practice. It also includes any codes and standards that the enterprise applies voluntarily.</p>
Incidents	<p>Incidents include:</p> <ul style="list-style-type: none"> • breaches or potential breaches of regulations • occurrences outside of standard procedure which may lead to lower environmental performance.
Enterprise plans	<p>Enterprise plans include:</p> <ul style="list-style-type: none"> • documented policies and procedures • work plans to minimise waste, increase efficiency of water/energy use, minimise environmental hazards
Suggestions	<p>Suggestions include ideas that help to:</p> <ul style="list-style-type: none"> • prevent and minimise environmental risks and maximise opportunities • reduce emissions of greenhouse gases • reduce use of non-renewable resources • improve energy efficiency • increase use of renewable, recyclable, reusable and recoverable resources • reduce waste • increasing the reusability/recyclability of wastes/products • reduce water usage and/or water wastage.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Competitive manufacturing tools
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Co-requisite units

Co-requisite units		

MSAENV472A Implement and monitor environmentally sustainable work practices

Modification History

Unit Descriptor

This competency covers the outcomes required to effectively analyse the workplace in relation to environmentally sustainable work practices and to implement improvements and monitor their effectiveness.

This unit is based on the sustainability guideline standard GCSSUS02A Implement and monitor environmentally sustainable work practices.

Application of the Unit

This competency applies to those who have responsibility for a specific area of work or who lead a work group or team. It addresses the knowledge, processes and techniques necessary to implement and monitor environmentally sustainable work practices, including the development of processes and tools.

It includes:

Identifying areas for improvement

Developing plans to make improvements

Implementing and monitoring improvements in environmental performance.

Competency field

Competitive manufacturing tools

Licensing/Regulatory Information

Pre-Requisites

Employability Skills Information

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Investigate current practices in relation to resource usage.	<ul style="list-style-type: none">1.1 Identify environmental regulations applying to the enterprise.1.2 Assess procedures for assessing compliance with environmental regulations.1.3 Collect information on environmental and resource efficiency systems and procedures, and provide to the work group where appropriate.1.4 Measure and record current resource usage by members of the work group.1.5 Analyse and record current purchasing strategies.1.6 Analyse current work processes to access information and data and assist in identifying areas for improvement.
2 Set targets for improvements.	<ul style="list-style-type: none">2.1 Seek input from stakeholders, key personnel and specialist.2.2 Access external sources of information and data as required.2.3 Evaluate alternative solutions to workplace environmental issues.2.4 Set efficiency targets.

- 3 Implement performance improvement strategies.
 - 3.1 Source techniques/tools to assist in achieving targets.
 - 3.2 Apply continuous improvement strategies to own work area of responsibility and communicate ideas and possible solutions to the work group and management.
 - 3.3 Integrate environmental and resource efficiency improvement plans for own work group with other operational activities and implement them.
 - 3.4 Seek suggestions and ideas about environmental and resource efficiency management from stakeholders and act upon them where appropriate.
 - 3.5 Implement costing strategies to fully value environmental assets.
- 4 Monitor performance.
 - 4.1 Document outcomes and communicate reports on targets to key personnel and stakeholders.
 - 4.2 Evaluate strategies.
 - 4.3 Set new targets and investigate and apply new tools and strategies.
 - 4.4 Promote successful strategies and reward participants where possible.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Competency includes sufficient knowledge to:

know how to access and use relevant environmental and resource efficiency systems and procedures

know best practice approaches relevant to own area of responsibility

know and apply strategies to maximise opportunities and minimise impacts relevant to own work area

know relevant environmental and resource efficiency issues specific to industry practices. and the skill to

be able to access and use relevant environmental and resource efficiency systems and procedures

be able to apply quality assurance systems relevant to own work area

be able to apply relevant supply chain procedures.

Language, literacy and numeracy requirements

This unit requires communication/consultation skills to ensure information is supplied to the work group.

Writing is required to comprehend documentation and interpret environmental and energy efficiency requirements.

Numeracy is required to interpret numeric workplace information, readings and measurements, handle data as required and complete numeric components of workplace forms/reports.

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the assessment guidelines for this training package.

Overview of assessment

A person who demonstrates competence in this unit must be able to provide evidence of the ability to develop and implement integrated sustainability policies and procedures within an enterprise. The review of the policy after implementation will also need to be evidenced.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit.

These may include the ability to:

- monitor and investigate current resource usage
- develop plans to improve sustainability
- implement environmental improvements.

Consistent performance should be demonstrated. For example, look to see that: environmental performance is routinely monitored and investigated areas for improvements are followed through and the implemented changes are in turn monitored and investigated.

Assessment method and context

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge. A holistic approach should be taken to the assessment.

Competence in this unit may be assessed:

- by demonstration in the workplace
- using targeted questioning for appropriate portions through use of specific project(s)
- by use of a suitable simulation and/or a range of case studies/scenarios
- by a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

This section should be read in conjunction with the range of variables for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts. Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This competency applies to all sectors of the manufacturing industry. It may also be applied to all sections of an organisation, including office, warehouse etc. This unit will need to be appropriately contextualised as it is applied across an organisation and across different industry sectors.

Procedures

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Environmental and resource efficiency issues

Environmental and resource efficiency issues include:

addressing environmental and resource sustainability initiatives such as Environmental Management Systems, action plans, surveys and audits

reference to standards, guidelines and approaches such as:

ISO 14001 Environmental Management Systems

Life Cycle Analyses

Global Reporting Initiative

Ecological footprinting

Triple Bottom Line reporting

Product Stewardship

determining enterprise's most appropriate waste treatment including waste to landfill, recycling, re-use and wastewater treatment

applying the waste management hierarchy in the workplace

initiating and/or maintaining appropriate enterprise procedures for operational energy consumption, including stationary energy and non stationary (transport).

Appropriate techniques

Appropriate techniques include:

material fed to/consumed by plant/equipment

plant meters and gauges

job cards including kanbans

examination of invoices from suppliers

measurements made under different conditions

examination of relevant information and data

others as appropriate to the specific industry contexts.

Compliance

Compliance includes meeting relevant federal, state and local government laws, by-laws, regulations and codes of practice.

Incidents

Incidents include:

breaches or potential breaches of regulations
occurrences outside of standard procedure which may lead to lower environmental performance.

Purchasing strategies

Purchasing strategies include:

influencing suppliers to take up environmental sustainability
selecting materials/components with a lower environmental profile.

Stakeholders, key personnel and specialists

Stakeholders, key personnel and specialists include individuals and groups both inside and outside the organisation that have some direct interest in the enterprise's conduct, actions, products and services, including:

employees at all levels of the organisation

customers

suppliers

other organisations

key personnel within the organisation, and specialists outside it who may have particular technical expertise

Suggestions

Suggestions includes ideas that help to:

prevent and minimise environmental risks and maximise opportunities

reduce emissions of greenhouse gases

reduce use of non-renewable resources

make more efficient use of energy

maximising opportunities to re use and recycle materials

identifying strategies to offset or mitigate environmental impacts. e.g. purchasing of carbon credits

expressing purchasing power through the selection of suppliers with improved environmental performance. e.g. purchasing renewable energy

eliminating the use of hazardous and toxic materials increasing the reusability/recyclability of wastes/products.

Unit Sector(s)

MSAENV472B Implement and monitor environmentally sustainable work practices

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This competency covers the outcomes required to effectively analyse the workplace in relation to environmentally sustainable work practices and to implement improvements and monitor their effectiveness.</p> <p>This unit is based on the sustainability guideline standard GCSSUS02A Implement and monitor environmentally sustainable work practices.</p>
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Application of the Unit

Application of the unit	<p>This competency applies to those who have responsibility for a specific area of work or who lead a work group or team. It addresses the knowledge, processes and techniques necessary to implement and monitor environmentally sustainable work practices, including the development of processes and tools.</p> <p>It includes:</p> <ul style="list-style-type: none"> • Identifying areas for improvement • Developing plans to make improvements • Implementing and monitoring improvements in environmental performance. <p>This competency applies to all sectors of the manufacturing industry and members of its value chain. It may also be applied to all sections of an organisation, including office, warehouse etc. This unit will need to be appropriately contextualised as it is applied across an organisation and across different industry sectors.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	This unit has no prerequisites	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Investigate current practices in relation to resource usage.	1.1 Identify environmental regulations applying to the enterprise. 1.2 Assess procedures for assessing <i>compliance</i> with environmental regulations. 1.3 Collect information on environmental and resource efficiency systems and procedures, and provide to the work group where appropriate. 1.4 Measure and record current resource usage by members of the work group. 1.5 Analyse and record current purchasing strategies. 1.6 Analyse current work processes to access information and data and assist in identifying areas for improvement.
2. Set targets for improvements.	2.1 Seek input from stakeholders, key personnel and specialists. 2.2 Access external sources of information and data as required. 2.3 Evaluate alternative solutions to workplace environmental issues. 2.4 Set efficiency targets.
3. Implement performance improvement strategies.	3.1 Source <i>techniques/tools</i> to assist in achieving targets. 3.2 Apply continuous improvement strategies to own work area of responsibility and communicate ideas and possible solutions to the work group and management. 3.3 Integrate environmental and resource efficiency improvement plans for own work group with other operational activities and implement them. 3.4 Seek suggestions and ideas about environmental and resource efficiency management from stakeholders and act upon them where appropriate. 3.5 Implement costing strategies to fully value environmental assets.
4. Monitor performance.	4.1 Document outcomes and communicate reports on targets to key personnel and stakeholders. 4.2 Evaluate strategies. 4.3 Set new targets and investigate and apply new tools and strategies. 4.4 Promote successful strategies and reward participants where possible.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- using relevant environmental and resource efficiency systems, tools and procedures
- applying quality assurance systems relevant to own work area
- applying relevant supply chain procedures
- measurement and calculation techniques
- communication/consultation skills to ensure information is supplied to the work group

Reading and writing is required to comprehend documentation and interpret environmental and energy efficiency requirements and to document and maintain records

Numeracy is required to interpret numeric workplace information, readings and measurements, handle data as required and complete numeric components of workplace forms/reports.

Required knowledge

Required knowledge includes:

- how to access and use relevant environmental and resource efficiency systems, tools and procedures
- understanding of best practice approaches relevant to own area of responsibility
- strategies to maximise opportunities and minimise impacts relevant to own work area
- relevant environmental and resource efficiency issues specific to industry practices
- methods for measuring and calculating resource usage

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>A person who demonstrates competence in this unit must be able to provide evidence of the ability to implement and monitor integrated environmental and resource efficiency management policies and procedures within an organisation.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to:</p> <ul style="list-style-type: none"> • monitor and investigate current resource usage • develop plans to improve sustainability • implement environmental improvements. <p>Consistent performance should be demonstrated. For example, look to see that:</p> <ul style="list-style-type: none"> • environmental performance is routinely monitored and investigated • areas for improvements are followed through and the implemented changes are in turn monitored and investigated.
<p>Context of and specific resources for assessment</p>	<p>This section should be read in conjunction with the range of variables for this unit of competency. Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.</p> <p>Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation.</p> <p>A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.</p> <p>Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified</p>

EVIDENCE GUIDE	
	for people with disabilities.
Method of assessment	<p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed:</p> <ul style="list-style-type: none"> • by demonstration in the workplace • using targeted questioning for appropriate portions • through use of specific project(s) • by use of a suitable simulation and/or a range of case studies/scenarios • by a combination of these techniques. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment.</p>
Guidance information for assessment	<p>Assessors need to be aware of any cultural issues that may affect responses to questions.</p> <p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.</p>

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Procedures

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Environmental and resource efficiency issues

Environmental and resource efficiency issues include:

- addressing environmental and resource sustainability initiatives such as Environmental Management Systems, action plans, surveys and audits
- reference to standards, guidelines and approaches such as:
 - ISO 14001 Environmental Management Systems
 - Life Cycle Analyses
 - Cradle to cradle
 - Global Reporting Initiative
 - Ecological footprinting
 - Triple Bottom Line reporting
 - Product Stewardship
- determining enterprise's most appropriate waste treatment including waste to landfill, recycling, re-use and wastewater treatment
- applying the waste management hierarchy in the workplace
- initiating and/or maintaining appropriate enterprise procedures for operational energy consumption, including stationary energy and

RANGE STATEMENT	
	<p>non stationary (transport)</p> <ul style="list-style-type: none"> • efficient use of water • minimising greenhouse gas emissions • use of controls to minimise the risk of environmental damage from hazardous substances
Measure	<p>Measuring techniques include:</p> <ul style="list-style-type: none"> • material fed to/consumed by plant/equipment • plant meters and gauges • job cards including kanbans • examination of invoices from suppliers • measurements made under different conditions • examination of relevant information and data • others as appropriate to the specific industry contexts.
Techniques and tools	<p>Techniques and tools may includeÂ : </p> <ul style="list-style-type: none"> • visual workplace concepts • measurement, display and/or recording devices • changed work practices/procedures • competence development and awareness training • process and equipment items
Compliance	<p>Compliance includes meeting relevant federal, state and local government laws, by-laws, regulations and codes of practice.</p>
Incidents	<p>Incidents include:</p> <ul style="list-style-type: none"> • breaches or potential breaches of regulations • occurrences outside of standard procedure which may lead to lower environmental performance
Purchasing strategies	<p>Purchasing strategies include:</p> <ul style="list-style-type: none"> • influencing suppliers to take up environmental sustainability • selecting materials/components with a lower environmental profile.
Stakeholders, key personnel and specialists	<p>Stakeholders, key personnel and specialists include individuals and groups both inside and outside the organisation that have some direct interest in the</p>

RANGE STATEMENT	
	<p>enterprise's conduct, actions, products and services, including:</p> <ul style="list-style-type: none"> • employees at all levels of the organisation • customers • suppliers • other organisations • key personnel within the organisation, and specialists outside it who may have particular technical expertise
Suggestions	<p>Suggestions includes ideas that help to:</p> <ul style="list-style-type: none"> • prevent and minimise environmental risks and maximise opportunities • reduce emissions of greenhouse gases • reduce use of non-renewable resources • make more efficient use of energy, water and other resources • maximise opportunities to re use and recycle materials • identify strategies to offset or mitigate environmental impacts. e.g. purchasing of carbon credits • express purchasing power through the selection of suppliers with improved environmental performance. e.g. purchasing renewable energy and materials with lower embedded carbon • eliminate the use of hazardous and toxic materials increasing the reusability/recyclability of wastes/products.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Competitive manufacturing tools
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Co-requisite units

Co-requisite units		

MSAENV672B Develop workplace policy and procedures for environmental sustainability

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	<p>This competency covers the outcomes required to develop and implement a workplace sustainability policy, including the modification of the policy to suit changed circumstances.</p> <p>This unit is based on the sustainability guideline standard GCSSUS03A Develop workplace policy and procedures for sustainability.</p>
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Application of the Unit

Application of the unit	<p>This competency applies to team leaders/supervisors/managers who are required to develop approaches to environmental sustainability within workplaces, including the development and implementation of policy.</p> <p>It includes:</p> <ul style="list-style-type: none">• Communicating with relevant stakeholders• Developing and monitoring sustainability policies• Reviewing and improving sustainability policies. <p>This competency applies to all sectors of the manufacturing industry. It may also be applied to all sections of an organisation, including office, warehouse etc.</p> <p>This unit will need to be appropriately contextualised as it is applied across an organisation and across different industry sectors.</p>
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units	This unit has no prerequisites	

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Develop workplace sustainability policy.	1.1 Define <i>scope of sustainability policy</i> . 1.2 Identify and consult <i>stakeholders</i> as a key component of the policy development process. 1.3 Review environmental sustainability <i>strategies</i> relevant to all stages of work covered by the policy 1.4 Make recommendations for policy options based on likely effectiveness, timeframes and cost. 1.5 Develop policy is that reflects the organisation's commitment to sustainability as an integral part of the business planning and as a business opportunity. 1.6 Agree upon appropriate methods of implementation.
2. Communicate the policy.	2.1 Promote the policy, including its expected outcome to key stakeholders. 2.2 Inform those involved in implementing the policy as to outcomes expected, activities to be undertaken and responsibilities assigned.
3. Implement the policy.	3.1 Develop and communicate procedures to help implement the policy. 3.2 Implement <i>strategies</i> for continuous improvement in resource efficiency. 3.3 Establish record systems for tracking continuous improvements in sustainability approaches and assign responsibilities.
4. Review policy implementation	4.1 Record outcomes and provide feedback to key personnel and stakeholders. 4.2 Investigate success or otherwise of policy. 4.3 Monitor records to identify trends that may require remedial action, and use to promote continuous improvement of performance. 4.4 Modify policy and or <i>procedures</i> as required to ensure improvements are made.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- developing and implementing systems and procedures to aid in the achievement of sustainability in the workplace
- applying quality assurance systems relevant to own enterprise
- accessing and applying other relevant enterprise policies, procedures and protocols
- relevant industry competency
- interpreting business/strategic plans

This unit requires the ability to:

- read and evaluate complex and formal documents such as policy and legislation
- research, analyse and present information
- prepare written reports requiring precision of expression and language and structures suited to the intended audience
- adjust communication to suit different audiences
- deal with different points of view and dissenting stakeholders.

Required knowledge

Required knowledge includes:

- understanding of relevant policy development and implementation processes and practices
- understanding of the principles, practices and available tools and techniques of sustainability management relevant to the particular industry context
- best practice approaches relevant to own work area
- equal employment opportunity, equity and diversity principles and occupational health and safety implications of policy/s being developed

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p>Overview of assessment</p>	<p>A person who demonstrates competence in this unit must be able to provide evidence of the ability to develop and implement integrated sustainability policies and procedures within an enterprise. The review of the policy after implementation will also need to be evidenced.</p>
<p>Critical aspects for assessment and evidence required to demonstrate competency in this unit</p>	<p>It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to:</p> <ul style="list-style-type: none"> • develop relevant policy and procedures that comply with the regulatory requirements and business plans • develop a workable implementation strategy • include measurable criteria for reviewing improvement. <p>Consistent performance should be demonstrated. For example, look to see that:</p> <ul style="list-style-type: none"> • policy implementation is reviewed • policy is developed to become part of the routine practices of the organisation.
<p>Context of and specific resources for assessment</p>	<p>This section should be read in conjunction with the range of variables for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation.</p> <p>A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.</p> <p>Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.</p>
<p>Method of assessment</p>	<p>Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by</p>

EVIDENCE GUIDE

	<p>the Elements, Performance Criteria and skills and knowledge.</p> <p>A holistic approach should be taken to the assessment.</p> <p>Competence in this unit may be assessed:</p> <ul style="list-style-type: none">• by demonstration in the workplace• using targeted questioning for appropriate portions• through use of specific project(s)• by use of a suitable simulation and/or a range of case studies/scenarios• by a combination of these techniques. <p>In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment.</p>
Guidance information for assessment	<p>Assessors need to be aware of any cultural issues that may affect responses to questions.</p> <p>Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.</p>

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p>Procedures</p>	<p>All operations are performed in accordance with procedures.</p> <p>Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.</p> <p>Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.</p>
<p>Scope of sustainability policy</p>	<p>Scope of sustainability policy include:</p> <ul style="list-style-type: none"> • The area/s of environmental sustainability to be targeted and whether social and economic sustainability will be incorporated • The parts of the enterprise to which it is to apply, including whether it is for the whole enterprise, one site, one work area or combinations of these • An investigation of the particular business and market context of the industry/ enterprise • Addressing sustainability initiatives through reference to standards, guidelines and approaches such as: <ul style="list-style-type: none"> • ISO 14001 Environmental Management Systems • Life Cycle Analyses • Cradle to grave/cradle to cradle • Global Reporting Initiative • Ecological Footprint Assessment • Triple Bottom Line reporting • Product Stewardship.
<p>Stakeholders</p>	<p>Stakeholders include individuals and groups both inside and outside the organisation that have some</p>

RANGE STATEMENT	
	<p>direct interest in the enterprise's conduct, actions, products and services, including:</p> <ul style="list-style-type: none"> • employees at all levels of the organisation • customers • suppliers • regulators • other organisations.
Strategies	<p>Implementation strategies include:</p> <ul style="list-style-type: none"> • awareness raising among stakeholders • training of staff in principles and techniques of sustainability • promotional activities. <p>Continuous improvement strategies include ongoing measuring, improving and monitoring such as:</p> <ul style="list-style-type: none"> • Plan, do, check, act cycles • Kaizen (continuous improvement) • Kaizen blitz (breakthrough improvement event) • Six sigma approaches <p>Environmental sustainability strategies include:</p> <ul style="list-style-type: none"> • reducing toxic material and hazardous chemical use • minimising resource use through changes in processes, facility design and management • supply chain and life cycle management approaches • sourcing renewable energy and low carbon footprint materials • reducing, re-using, recycling and waste reduction • product and process improvements • carbon offsets • reducing greenhouse gas and other emissions

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Competitive manufacturing tools
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Co-requisite units

Co-requisite units		

MSAPMOHS100A Follow OHS procedures

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

On completion of this unit, the worker will be able to recognise hazards commonly occurring at the workplace and follow health and safety instructions and procedures in the workplace.

Application of the Unit

Application of this unit

This competency applies to workers who are required to follow OHS instructions and procedures relating to the work being undertaken. Workers will be aware of the importance of maintaining their own health and safety and the health and safety of others in the workplace. Individual workers will also be capable of dealing with incidents and emergencies within their own scope of responsibility and under the direction of the supervisor.

While the instructions and procedures must be derived from the relevant organisation OHS policies, the worker is not required to understand or interpret these policies. This interpretation should be undertaken by the supervisor when informing workers of the OHS requirements.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has **no** prerequisites.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT ELEMENT	PERFORMANCE CRITERIA Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
1. Recognise hazards.	1.1 Identify hazards commonly found in the workplace. 1.2 Check work area routinely before and during work. 1.3 Describe causes of identified hazards.
2. Follow procedures for hazard control.	2.1 Follow procedures to remove or minimise hazards, within the scope of responsibilities and competencies. 2.2 Use required personal protective and other safety equipment. 2.3 Describe the potential consequences of failing to follow these procedures and instructions.
3. Follow emergency procedures.	3.1 Recognise emergency/emergency alarm. 3.2 Go to muster point following procedure. 3.3 Follow instructions related to the emergency.
4. Report problems.	4.1 Report to appropriate people in accordance with workplace procedures when hazards arise.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit. Knowledge and understanding is required of the workplace occupational health and safety (OHS) system sufficient to recognise situations affecting OHS and to take the appropriate action to rectify the situation.

Awareness is required that OHS issues are regulated by State/Territory Acts, regulations, codes of practice and industry standards.

Employees need to be able to follow OHS procedures.

Competence includes the ability to apply and describe procedures for:

- recognising hazards in the workplace
- recognising safety signs and symbols
- recognising hazards commonly found in the workplace and standard controls
- reporting hazards identified to the designated person/according to procedure.

Competence also includes the ability to:

- describe the rights and responsibilities of employees under the OHS legislation
- use and maintain appropriate PPE where required
- communicate OHS issues
- locate and follow OHS procedures under direct supervision.

Language, literacy and numeracy requirements

This unit requires the ability to recognise and interpret safety signs and other basic safety information. It also requires the ability to report hazards in an appropriate way and to follow emergency instructions.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

The unit will be assessed in as holistic a manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations that will include disruptions to normal, smooth operation.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to:

- describe the workplace OHS system and know the importance of critical procedures
- recognise potential situations requiring action
- implement appropriate corrective action.

Emphasis should be on the ability to avoid a critical incident rather than on recovery from a disaster.

Consistent performance should be demonstrated. For example, look to see that:

- hazards and application of appropriate risk controls are known
- other hazards in the workplace that may arise are known and reporting/taking actions are according to procedure.

Assessment method and context

Assessment for this unit of competency will be on a manufacturing site or in a manufacturing environment.

Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual work environment and will include walk throughs of the relevant competency components. Simulations may also include the use of case studies/scenarios and role plays.

This unit requires a body of knowledge which will be assessed through questioning and the use of 'what if' scenarios both in the work environment (during demonstration of normal operations and walk throughs of abnormal operations) and off the job.

Assessors need to be aware of any cultural issues that may affect responses to questions. Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

Assessment will require access to a manufacturing plant or working environment over an extended period of time, or a suitable method of gathering evidence of knowledge and understanding over a range of situations. A bank of scenarios, case studies, and 'what ifs' will be required, as will a bank of questions which will be used to check the reasoning behind the 'observable actions.'

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This unit of competency describes OHS requirements applicable for all workers whose work involves the use of workplace policies and procedures to maintain a safe work environment for themselves and others.

It is expected that this competency may be applicable in combination with other industry, occupation or workplace-specific competencies. In all cases it may be appropriate to assess this unit concurrently with relevant teamwork and communication units.

Procedures

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Hazards and hazard causes

Known hazards, such as those identified in procedures or training, are recognised. The underlying causes of these identified hazards are also described, eg *the identified hazard is slipping, the cause is spilled granules.*

Tools and equipment

This competency includes use of and checks on equipment and tools such as:

- housekeeping checks, such as obstructions on the floor which may create slip/trip hazard
- guards in place
- equipment in safe condition
- work area clear and organised
- nothing unusual/different
- emergency equipment available
- PPE is functional.

Hazards

Typical hazards include:

- handling chemicals and hazardous materials
- chemical and or hazardous materials spillage
- gases and liquids under pressure
- moving machinery
- materials handling
- working at heights, in restricted or confined spaces, or environments subjected to heat, noise, dusts or vapours
- fire and explosion.

Problems

Reporting problems means 'apply procedures to recognise and report hazards'.

Typical problems may include:

- recognition of hazards
- problems encountered in controlling risks associated with hazards
- observation of an injury and/or incident which occurred in the workplace
- clarification of understanding of OHS policies and procedures.

Personnel

Appropriate personnel for OHS referrals may include:

- employer
- supervisor
- employees elected as OHS representatives
- other personnel with OHS responsibilities.
-

Unit Sector(s)

Not applicable.

MSAPMOHS200A Work safely

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

On completion of this unit, the worker will be able to identify Occupational Health and Safety (OHS) hazards, and assess risk, as well as follow instructions and procedures in the workplace with minimal supervision. The worker will also be capable of participating in and contributing to OHS management issues.

Application of the Unit

Application of this unit

This competency applies to all workers as they carry out their normal day to day activities in a safe manner in compliance with legislative requirements and their duty of care.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has **no** prerequisites.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT ELEMENT	PERFORMANCE CRITERIA
	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
1. Identify hazards and assess risk.	1.1 Identify hazards in the work area before and during work. 1.2 Assess risks for the identified hazards. 1.3 Identify controls for these hazards from procedures. 1.4 Review effectiveness of controls within the scope of authority. 1.5 Identify and report remaining risk.
2. Follow procedures for risk control.	2.1 Control risks when working under minimal supervision by following workplace procedures. 2.2 Select, use and maintain relevant personal protective equipment (PPE). 2.3 Handle and store hazardous materials safely.
3. Follow emergency procedures	3.1 Recognise emergency situations. 3.2 Take appropriate initial emergency action. 3.3 Follow procedures for dealing with a range of emergencies.

ELEMENT ELEMENT	PERFORMANCE CRITERIA
	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
4. Initiate suggestions to enhance task/job-specific safety.	4.1 Raise OHS issues with designated personnel in accordance with workplace procedures and relevant requirements of OHS legislation. 4.2 Contribute to participative arrangements for OHS management in the workplace within organisation procedures and the scope of responsibilities and competencies. 4.3 Provide input to minimise hazards in work area in line with organisation OHS procedures. 4.4 Provide input to opportunities for development of work group's competencies in relation to OHS. 4.5 Support the implementation of procedures to control

ELEMENT ELEMENT	PERFORMANCE CRITERIA Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
	risks using the hierarchy of control and in accordance with organisation procedures. 4.6 Report to appropriate people in accordance with workplace procedures when non-routine hazards arise.
5. Apply knowledge of OHS legislation and the organisation OHS policies and procedures	5.1 Follow workplace procedures to achieve a safe working environment in accordance with all relevant OHS legislation, including codes of practice relating to particular hazards within the workplace or industry. 5.2 Identify the rights and responsibilities of employees and employers under the relevant OHS legislation. 5.3 Complete (personally or with assistance) hazard, accident or incident reports as required by workplace procedures and relevant sections of OHS legislation.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit. Knowledge and understanding is required of the workplace OHS system and relevant industry standards, sufficient to participate in OHS activities and within the scope of work responsibilities and competencies.

Competence includes the ability to apply and describe:

- the identification of hazards and hazardous areas
- methods for assessing risk
- the identification of standard controls for the hazards
- a simple evaluation of the effectiveness of the controls
- an awareness of the need for further action
- the rights and responsibilities of employees under the OHS legislation
- management systems and procedures for OHS
- the hierarchy of control
- hazard policies, procedures and information
- safety procedures
- emergency, fire and accident procedures
- emergency procedures for handling hazardous materials
- consequences of inappropriate handling of hazardous materials.

Competence also requires the ability to:

- locate, understand and follow workplace OHS procedures
- identify and interpret signs and symbols, including emergency alarms
- recognise hazards common to the industry and in their own workplace
- locate sources of OHS information within the workplace
- select and use personal protective clothing and equipment
- correctly use equipment for handling of chemicals/materials
- interpret and apply relevant Material Safety Data Sheets (MSDS).

Language, literacy and numeracy requirements

This unit requires the ability to read and apply hazard information in the workplace and make suggestions to enhance safety.

Writing is required to the level of completing required safety/incident reports.

Numeracy is required to complete incident reports and interpret hazard information.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

The unit will be assessed in as holistic a manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations that will include disruptions to normal, smooth operation.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Consistent safe working is the critical aspect for which evidence should be sought. It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to:

- recognise potential situations requiring action
- implement appropriate corrective action.

Consistent performance should be demonstrated. For example, look to see that relevant workplace procedures are understood, in particular:

- hazard policies and procedures
- emergency, fire and accident procedures
- procedures for the use of personal protective clothing and equipment
- hazard identification and risk assessment procedures.

The following should also be known and understood:

- the hazards and potential risks in the workplace
- the consultation processes, either general or specific to OHS
- OHS information (what is there and how to access it)
- specific hazard policies procedures.

These aspects may be best assessed using a range of scenarios/case studies and 'what ifs' as the stimulus with a walk through forming part of the response. These assessment activities should cover a range of problems, including new, unusual and extreme situations, which may have been generated from the past incident history of the workplace, incidents on similar plants around the world, hazard analysis activities and similar sources.

Assessment method and context

Assessment for this unit of competency will be on a manufacturing site or in a manufacturing environment.

Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual workplace and will include walk throughs of the relevant competency components. Simulations may also include the use of case studies/scenarios and role plays.

This unit of competency requires a significant body of knowledge which will be assessed through questioning and the use of 'what if' scenarios both in the workplace (during demonstration of normal operations and walk throughs of abnormal operations) and off the job.

It is expected that this competency may be applicable in combination with other industry, occupation or workplace-specific competencies. In all cases it may be appropriate to assess this unit concurrently with relevant teamwork and communication units.

Specific resources for assessment

Assessment will require access to a manufacturing environment over an extended period of time, or a suitable method of gathering evidence of operating ability over a range of situations. A bank of scenarios/case studies and 'what ifs' will be required as will a bank of questions which will be used to probe the reasoning behind the observable actions.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This unit of competency describes OHS requirements applicable for all workers whose work involves the use of workplace policies and procedures to maintain a safe work environment for themselves and others.

It is expected that workers will be provided with clear directions, information, instruction, training and appropriate supervision regarding the relevant State/Territory OHS legislation, codes of practice, relevant industry standards, workplace procedures and work instructions.

Procedures

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Identify hazards

Hazard identification is the identification of known hazards in the workplace such as might be included in procedures, training and other workplace methods of identifying hazards.

Assess risks

Risk assessment is used in compliance with the relevant OHS acts and regulations.

Assessment is to the extent required by the acts and regulations and is as relevant to the job.

Identify hazard controls

Identification of hazard controls is identifying the controls specified in the procedures or similar. Reviewing their effectiveness includes checking that they are in place and operational in accordance with standard procedure.

Tools and equipment

This competency includes use of equipment and tools such as:

- PPE
- handling aids
- other safety equipment.

Personal Protective Equipment (PPE)

Typical PPE includes:

- hard hats
- goggles/glasses/face shields
- hearing protection (ear muffs, plugs)
- dusk masks/canister masks/ SCBA/ long range breathers
- gloves/gauntlets
- safety boots
- antistatic equipment
- overalls/aprons/acid jackets/pants.

Selecting and using PPE includes:

- outlining the functions for each type of PPE used in the work environment
- identifying the situations in which specific types of PPE would be used

- using PPE correctly as required in a working environment.

Hazards

Typical hazards include:

- handling chemicals and hazardous materials
- chemical and or hazardous materials spillage
- gases and liquids under pressure
- moving machinery
- materials handling
- working at heights,
- confined spaces
- heat
- noise
- dusts or vapours
- fire and explosion
- dangerous goods.

Personnel

Appropriate personnel for OHS referrals may include:

- employer
- supervisor
- employees elected as OHS representatives
- other personnel with OHS responsibilities.

OHS Issues

OHS issues which may need to be raised by workers with designated personnel may include:

- recognition of hazards/methods of identifying hazards
- problems encountered in controlling risks associated with hazards (any of the controls as per the hierarchy of control which are relevant)
- observation of an injury and/or incident which occurred in the workplace
- clarification of understanding of OHS policies and procedures.

Recognise emergency situation

Recognition of emergency situations is from alarms, signals or other obvious mechanisms in the workplace.

Unit Sector(s)

Not applicable.

MSAPMOHS300A Facilitate the implementation of OHS for a work group

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

On completion of this unit, the worker will be able to implement and monitor defined OHS policies and procedures for a work group or area, within their scope of responsibilities.

Application of the Unit

Application of this unit

This competency applies to operators who are capable of coaching the team in participating and contributing to OHS management issues. The worker will be able to perform duties that are required of a safety committee member or safety representative in an organisation.

Typically this worker might be a team leader or on the OHS committee.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has the prerequisite of *MSAOHS200A Work safely*.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT ELEMENT	PERFORMANCE CRITERIA Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
1. Communicate OHS information for co-workers in team.	1.1 Accurately and clearly explain to the work group basic OHS rights, responsibilities and requirements. 1.2 Provide, in a readily accessible manner, information on the relevant organisation OHS policies, procedures and programs, and accurately and clearly explain them to the work group. 1.3 Regularly provide relevant information about identified hazards and the outcomes of risk assessment and risk control procedures, and accurately and clearly explain them to the work group.
2. Coach co-workers in team.	2.1 Establish mutual support groups, eg buddy system, to encourage effective development of individual and group competencies in OHS. 2.2 Provide personal encouragement and assistance to team members to contribute to the management of OHS at the workplace.
3. Facilitate the consultative process.	3.1 Deal with, and promptly resolve, issues raised through consultation or refer to the appropriate personnel for resolution in accordance with workplace procedures. 3.2 Seek input from work group on OHS issues and proposed changes to process, procedures or work place. 3.3 Encourage and use feedback from individuals and teams to identify and implement improvements in the management of OHS. 3.4 Promptly inform the work group of the outcomes of consultation over OHS issues.
4. Implement and monitor organisation procedures for identifying hazards, and assessing and controlling risk.	4.1 Implement and monitor adherence to work procedures to identify hazards and assess and control risk. 4.2 Monitor existing risk control measures and report results regularly. 4.3 Access internal and external sources of relevant OHS information. 4.4 Evaluate and identify inadequacies in existing risk

ELEMENT ELEMENT	PERFORMANCE CRITERIA Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
	<p>control measures in accordance with the hierarchy of control, and report to designated personnel.</p> <p>4.5 Identify inadequacies in resource allocation for implementation of risk control measures and report to designated personnel.</p> <p>4.6 Identify actual/potential inadequacies in procedures and report to designated personnel.</p> <p>4.7 Identify actual/potential inadequacies in individual or team competency and report to designated personnel.</p>
5. Maintain and use OHS records.	<p>5.1 Accurately and legibly complete OHS records for work area, in accordance with workplace requirements for OHS records and legal requirements for the maintenance of records of occupational injury and disease.</p> <p>5.2 Use aggregated information from the area OHS records to identify hazards and monitor risk control procedures within work area according to procedures and within scope of responsibilities and competencies.</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit. Knowledge and understanding of the workplace OHS system and State OHS legislative requirements, codes of practice and relevant industry standards sufficient to implement and monitor OHS activities for a work group or area within the scope of their responsibilities and competencies.

In these industries which are characterised by high potential hazard, employees need to exercise their duty of care responsibilities not only within the general OHS Acts and regulations, but also within those State and national standards applying to hazardous substances, dangerous goods and major hazards.

Competence includes the ability to apply and describe the:

- identification of hazards in the workplace and standard controls
- assessment of risk and implementation of risk control measures
- rights and responsibilities of employees under OHS legislation
- obligations of employers under the OHS legislation
- legislative requirements for information and consultation
- arrangements for consultation within the workplace
- management systems and procedures for OHS
- the hierarchy of control
- hazard policies and procedures
- safety procedures
- emergency, fire and accident procedures.

Competence also requires the ability to:

- locate, understand and follow workplace OHS procedures
- identify and communicate with all key personnel in the organisation
- identify and access relevant sources of information
- interpret OHS data such as tables of numbers and graphs
- select, recommend and use personal protective clothing and equipment.

Language, literacy and numeracy requirements

This unit requires the ability to communicate with members of the work team/area and also management. It also requires the ability to interpret and apply OHS procedures and explain them to work team members.

Writing is required to the level of being able to keep records as required and also keep notes from meetings.

Numeracy is required to interpret incident statistics and hazard data.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

The unit will be assessed in as holistic a manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations that will include disruptions to normal, smooth operation.

Where the assessee does not currently possess evidence of competency in *MSAOHS200A Work safely*, it may be co-assessed with this unit.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to:

- communicate effectively with the work group(s)
- proactively promote consultation and participation in the OHS processes
- participate in decisions which impact on OHS for their workgroup.

Consistent performance should be demonstrated. In particular look for knowledge and understanding of:

- specific hazard policies and the use of hazard procedures (eg identify, assess, control)
- the consultation processes, either general or specific to OHS
- OHS information
- OHS record keeping
- counselling, disciplinary and issue resolution processes.

These aspects may be best assessed using a range of scenarios/case studies/what ifs as the stimulus with a walk through forming part of the response. These assessment activities should cover a range of problems, including new, unusual and extreme situations that may have been generated from the past incident history of the workplace, incidents on similar plants around the world, hazard analysis activities and similar sources.

Assessment method and context

Assessment for this unit of competency will be on a processing plant or in a manufacturing environment.

Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual workplace and will include walk throughs of the relevant competency components. Simulations may also include the use of case studies/scenarios and role plays.

This unit of competency requires a significant body of knowledge which will be assessed through questioning and the use of 'what if' scenarios both in the workplace (during demonstration of normal operations and walk throughs of abnormal operations) and off the job.

It is expected that this competency may be applicable in combination with other industry, occupation or workplace-specific competencies. In all cases it may be appropriate to assess this unit concurrently with relevant teamwork and communication units.

Specific resources for assessment

Assessment will require access to an operating plant or manufacturing environment over an extended period of time, or a suitable method of gathering evidence of operating ability over a range of situations. A bank of scenarios/case studies/what ifs will be required as will a bank of questions that will be used to probe the reasoning behind the observable actions.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This unit describes OHS requirements applicable for all workers who are responsible for the organisation of OHS arrangements for a work group or area, including coaching.

It is expected that workers will be provided with clear directions, information, instruction, training and appropriate supervision regarding the relevant State/Territory OHS legislation, codes of practice, relevant industry standards, workplace procedures and work instructions.

Procedures

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Hazards

Typical hazards include:

- handling chemicals and hazardous materials
- chemical and or hazardous materials spillage
- gases and liquids under pressure
- moving machinery
- materials handling
- working at heights, in restricted or confined spaces, or in environments subjected to heat, noise, dusts or vapours
- fire and explosion.

Personnel

Appropriate personnel for OHS referrals may include:

- employer
- supervisor
- employees elected as OHS representatives
- other personnel with OHS responsibilities.

Participative arrangements

Participative arrangements for OHS management may involve:

- making safety suggestions
- information sessions on existing or new issues
- meetings between employer and employees or representatives
- access to relevant workplace information
- use of clear and understandable language.

OHS Issues

OHS issues which may need to be raised by workers with designated personnel may include:

- recognition of hazards
- problems encountered in controlling risks associated with hazards
- clarification of understanding of OHS policies and procedures.

OHS Records

OHS records include:

- hazard and incident reports
- logs/logs sheets
- inspection/start up/shut down checklists
- injury reports
- maintenance records.

OHS Information Sources

Relevant sources of OHS information include:

- OHS legislation and codes of practice
- industry standards for materials, process, equipment etc
- SA/ISO standards
- OHS authorities
- unions and industry associations
- internet, journals, magazines
- manufacturer/supplier manuals/specifications
- policies and procedures
- JSA, risk assessments, HAZOPs
- hazard, incident and injury records
- training resources
- employee information brochures, newsletters etc
- OHS reports such as inspections, technical reports.
-

Unit Sector(s)

Not applicable.

MSAPMOPS101A Make measurements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This unit covers the making or taking of measurements in a variety of sites and locations.

Application of the Unit

Application of this unit

This unit applies to people who are required to apply basic knowledge and skills in performing routine measurements for industry related operations. It is typically performed by people working either independently or as part of a work team.

The worker will:

- make measurements using physical and/or chemical measuring equipment
- record results using either a manual or computer system
- identify problems and take required action
- complete logs and reports.
-

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has **no** prerequisites.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
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Elements and Performance Criteria

ELEMENT ELEMENT	PERFORMANCE CRITERIA Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
1. Identify appropriate measurements.	1.1 Select appropriate measuring equipment. 1.2 Identify units to be used, and the detail required. 1.3 Check measuring equipment is in calibration.
2. Perform measurements	2.1 Explain range of results that may be obtained 2.2 Identify and take account of relevant external factors. 2.3 Perform measurements using appropriate techniques 2.4 Compare measurements against the range of expected results 2.5 Self-check numerical information for accuracy and correctness. 2.6 Explain the need for calibration and use calibrated equipment to make measurements.
3. Record measurements as required.	3.1 Accurately record the result in the appropriate format. 3.2 Record the result to the appropriate level of detail.
4. Respond to routine problems in accordance with procedures	4.1 Recognise known faults that occur during the measurement. 4.2 Identify and take action on causes of routine faults. 4.3 Log problems as required. 4.4 Identify non-routine problems and report to designated person.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Knowledge and understanding of the process sufficient to recognise non-standard situations and then determine appropriate action which is consistent with operating guidelines. For example, in gel coating, a coating less than 5 mils thick may wrinkle, especially when brush marks are present. Thickness is checked using a gel coat thickness gauge.

Knowledge and the ability to implement the organisation's procedures and relevant regulatory requirements, within appropriate time constraints and work standards.

Application of approved hazard control and safety procedures and the use of PPE in relation to handling materials, equipment operation and cleanup.

Knowledge in measurement sufficient for consistent performance to specifications including:

- basic units of measurement (eg kilogram, metre, second)
- correct selection and use of measuring devices
- application of relevant mathematical calculations and procedures, including additions, subtractions, division, fractions, percentages
- use of dial, scale and digital readouts
- the need for calibration and methods of checking equipment is within calibration.

Language, literacy and numeracy requirements

This unit requires the ability to read and interpret typical product specifications, job sheets and material labels as provided.

Writing is required to the level of completing workplace forms.

Numeracy is required to the level of basic arithmetical manipulations and the interpretation of the significance of numbers and variations of readings.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to

- take accurate measures using the appropriate measuring device
- apply approved procedures.

Consistent performance should be demonstrated. For example, look to see that

- standards in taking measurements are met consistently
- all safety procedures are followed.

Assessment method and context

Assessment will occur over a range of situations requiring the taking of measurements and will be undertaken in a work-like environment.

Competence in this unit may be assessed:

- by observation or questioning to indicate understanding and knowledge
- in a situation allowing the generation of evidence of the ability to respond to problems
- by using a suitable simulation and/or a range of case studies/scenarios
- through a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts. Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This competency applies to all routine measurements within a manufacturing environment.

Procedures

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Tools and equipment

This competency includes use of equipment and tools such as:

- measuring devices, including gauges, dip-sticks, thermometers, weighing scales, length/thickness measuring
- calculators
- computers for recording results

- relevant personal protective equipment.

Hazards

Typical hazards include:

- dusts/vapour
- temperature
- hazardous substances
- manual handling hazards.

Problems

Respond to routine problems means 'apply known solutions to a limited range of predictable problems'.

Typical problems may include:

- measuring instrument not fit for use (eg not within calibration)
- appropriate measuring device not available
- deviations from normal range of readings
- effect of temperature on material properties.

Appropriate action for non-routine problems may be reporting to designated person or other action specified in the procedures.

Variables

Key variables to be monitored include:

- extent
- dimension
- quantity
- mass
- capacity
- capability.
-

Unit Sector(s)

Not applicable.

MSAPMOPS363A Organise on site work

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This competency covers organising of work in a field situation. This unit typically applies to operators who are preparing to do work in remote mine sites, or large industrial complexes where extensive permit or clearance systems exist.

This unit covers the organising and preparation for on site work. Refer to other competency units depending on the nature of the work to be done on site.

Application of the Unit

Application of this unit

The emphasis is on the planning of the work, the arrangements that are required to allow the on-site work to proceed and the set-up of tools, equipment and materials at the site. It includes the scoping, planning, communication and hazard controls required for the job. The work may be to do with conveyor systems, tanks, pipelines, equipment or other work in situ.

The worker will:

- plan the job
- arrange all permissions and permits
- select and arrange all equipment and materials to the site
- set up tools, equipment and materials on site
- identify any hazards and take appropriate action.
-

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has **no** prerequisites.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

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Elements and Performance Criteria

ELEMENT ELEMENT	PERFORMANCE CRITERIA Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
1. Plan the work.	1.1 Review the requirements of the work 1.2 Arrange all necessary permits and permissions for site inspections and work. 1.3 Examine the site where the work will take place. 1.4 Identify plant and equipment isolations. 1.5 Identify hazards and risk controls. 1.6 Plan to minimise downtime, economically use materials and meet quality specifications. 1.7 Plan work, including sequences, times, process stages, engineering controls and personal protection requirements. 1.8 Prepare all necessary documentation and finalise the permissions and approvals for conducting the work.
2. Prepare equipment, tools and materials.	2.1 Identify equipment, tools and materials required. 2.2 Arrange for supply of all tools, equipment and materials. 2.3 Arrange for transport to site of all equipment, tools and materials.
3. Set up work location.	3.1 Assemble and check materials and tools for suitability for purpose. 3.2 Establish a safe work area. 3.3 Establish isolations and tag/lock out as required. 3.4 Check tools, equipment and materials against site situation and conditions.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Application of knowledge of the materials, equipment and process sufficient to recognise material and equipment conditions which may lead to out-of-specification production. For example, consumables for use in the work are within recommended shelf life.

Knowledge of organisation procedures and relevant regulatory requirements along with the ability to implement them within appropriate time constraints and work standards.

Application of the knowledge of managing risks using the hierarchy of controls.

Application of approved hazard control, safety procedures and the use of PPE in relation to handling materials, equipment operation and clean up. This may include the preparation of Job Hazard Analysis (JHA) or similar hazard management and planning techniques.

Competence includes the ability, for the practical completion of the job, to apply and/or explain:

- interpretation of specifications, designs and/or work orders
- understanding of the operation, equipment principles and details of construction
- production workflow sequences and inherent hazards with on-site work
- design requirements and details of the work to enable the planning to and the work to be completed as required
- planning process, including breaking the work down into steps and stages
- correct selection and use of equipment, materials, processes and procedures
- products, materials and material characteristics.

Competence also includes the ability to:

- plan own work, including predicting consequences and identifying improvements
- identify factors which may affect product quality or production output and appropriate remedies
- identify when the operator is able to rectify faults and when assistance is required.

Language, literacy and numeracy requirements

This unit requires the ability to read and interpret typical work specifications, job sheets and material labels as provided to operators.

Writing is required to the level of completing workplace forms, plans and job reports.

Numeracy is also required, eg to determine quantities of materials for the work.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

This unit may be co-assessed with units concerned with the nature of the work being undertaken.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to:

- identify critical materials properties and operating characteristics in relation to the condition of the equipment
- plan work process within organisational procedures and explain the reasons for the steps in the process
- take appropriate action to observe site conditions, equipment configuration, possible work-site difficulties, hazards and identify problems to be reported.

Consistent performance should be demonstrated. For example, look to see that:

- production needs are interpreted and met
- problems are anticipated from observations
- problems are efficiently resolved
- the repair runs consistently and smoothly.

Assessment method and context

Assessment will occur using industrial scenarios and will be undertaken in a work-like environment.

Competence in this unit may be assessed:

- on a processing plant allowing for operation under all normal and a range of abnormal conditions
- in a situation allowing the generation of evidence of the ability to recognise, anticipate and solve problems
- by using a suitable simulation and/or a range of case studies/scenarios
- through a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts. Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This competency applies to on-site work environments and sectors typically within manufacturing or heavy industries. It covers, but may not be limited to, the preparation for on-site work.

Procedures

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, manufacturer specifications and procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

On-site work

On-site work covered by this competency may include (but may not be limited to):

- conveyor belt splicing and repairs
- rubber lagging of conveyor drums
- rubber lining of tanks
- polymer piping systems installation or repairs
- polymer constructions (eg fume cupboards or signs)
- refractory lining
- concrete casting
- other work to be done on-site, and not in a factory or workshop.

Work requirements

Work requirements may be determined from:

- work orders
- specifications
- job descriptions
- designs
- other documents.

Isolations

Isolations include:

- power supply
- tag locations
- process materials
- energy sources and
- equipment isolation system.

Safe work area

Safe work area includes area(s) for:

- scaffolding
- lifting gear
- lay down area

- work area
- other equipment in appropriate locations.

Tools and equipment

This competency includes planning and set-up of equipment and tools such as:

- manual handling aids
- hand winches
- portable power generators and vulcanising equipment
- knives and other cutting instruments
- portable hoists/lifting equipment not requiring any special permits or licences
- spanners, wrenches, hammers etc
- power operated hand tools such as drills, cutting disks, sanders
- specialised tools for the job
- relevant personal protective equipment.

Hazards

Typical hazards include:

- manual handling hazards
- working at heights
- dust, process liquids, process materials
- hand tools and hand held power tools (eg knife, cutting and grinding disk hazards).

Problems

Anticipate and solve problems means resolve a wide range of routine and non-routine problems, using product and process knowledge to develop solutions to problems which do not have a known solution/a solution recorded in the procedures.

Typical process and product problems may include:

- lack of accessibility
- equipment isolations
- logistics of materials and equipment to work site
- variations in materials and/or contamination of materials.

Variables

Key variables to be monitored include:

- environmental conditions
- lock-out/isolation of equipment
- worksite location, remoteness, accessibility
- job variations, changes.
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Unit Sector(s)

Not applicable.

MSAPMPER200B Work in accordance with an issued permit

Modification History

Not applicable.

Unit Descriptor

This unit aims to ensure that people working under a permit to work understand the system, know the limitations of the permit under which they are working and comply with all the requirements of the permit. The people to whom this unit applies may be called 'permit recipients' or 'permit holders' by some organisations. Some organisations call 'permits' 'clearances'

This unit covers the basic competency of working under a permit. Where entry to a confined space is required, then *MSAPMPER205B Enter confined space* is also required. The safety observer (standby person) competencies are covered by *MSAPMPER202A Observe permit work*. The issuing of permits is covered by *MSAPMPER300B Issue work permits*.

Application of the Unit

This competency applies to persons who are required to conduct work activities under the authority of an issued permit to work and within the context and requirements of that permit. This typically applies to all work done by maintenance staff and contractors, and also to any other non-process work performed on the plant. It includes:

- identifying the range and scope of work covered by the permit
- checking that the right type of permit has been issued for the type of work
- adequately preparing to undertake the work, including obtaining all necessary safety equipment and PPE
- undertaking the work strictly in accordance with the provisions of the permit
- maintaining correct housekeeping with permit activities
- completing work in accordance with the permit requirements
- querying or raising matters about the permit if the scope of work/nature of the tools to be used varies from that covered by the permit
- handing back the permit in accordance with procedures and obtaining appropriate sign off as required.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<p>1. Apply for permit(s)</p>	<p>1.1. Confirm the scope and location of the work to be done 1.2. Identify the need for a work permit(s) for the work to be carried out. 1.3. Identify the type of work permit required. 1.4. Collate information required for the issue of the permit 1.5. Apply for the permit following the organisations requirements</p>
<p>2. Identify the scope of the permit.</p>	<p>2.1. Check that work to be done complies with the permit type. 2.2. Check that the scope and location of work comply with the permit issued 2.3. Check that the hazard controls specified on the permit are consistent with the hazard analysis 2.4. Check that preparations specified on the permit have been completed 2.5. Sign onto/receive the permit.</p>
<p>3. Prepare for permitted work.</p>	<p>3.1. Maintain safe working conditions and environment by using available isolation procedures, safety equipment and emergency procedures. 3.2. Monitor plant conditions and hazards to ensure work under the permit remains safe. 3.3. Ensure that appropriate safety equipment and clothing are selected and worn as required by the permit and relevant procedures. 3.4. Inspect work area to ensure safety and compliance with permit requirements and procedures.</p>
<p>4. Work in accordance with an issued permit.</p>	<p>4.1. Use required hazard reduction/control measures. 4.2. Comply with requirements of the permit including safety observer if required. 4.3. Ensure compliance with scope, location and timeframe specified in the permit or seek re-authorisation as required 4.4. Suspend job and make work site safe before leaving job. 4.5. Formally seek and receive authorised extensions to the permit when required. 4.6. Give end of day status report to permit issuer.</p>
<p>5. Complete permit(s) to work.</p>	<p>5.1. Obtain new permit(s) or have existing permit(s) revalidated before work is recommenced. 5.2. Check the work conducted against the issued permit(s) to ensure that all the nominated work requirements have been satisfied. 5.3. Monitor general housekeeping to ensure that the site has been</p>

	<p>left in a clean and safe condition.</p> <p>5.4. Ensure personal lockouts/tag outs/isolations are removed in accordance with procedures</p> <p>5.5. Communicate status of the work conducted and the results of the permit to relevant personnel.</p> <p>5.6. Complete documentation as required and have permit signed off when job is completed.</p>
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Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required skills:

Competence includes the ability to:

- access and interpret information relevant to specific tasks (eg labels, MSDSs hazchem signs)
- identify changes to conditions which may lead to the permit being revoked before the job is completed
- describe and/or explain hazards associated with tasks covered by the permit, types of tests required for the issue of work permits – the types of tests to include, atmospheric/oxygen/breathability, flammability/explosivity, toxicity/TWA, temperature, humidity
- the impact of the regulatory framework and organisation procedures under which the permit operates upon the particular job(s) requiring the permit.

Language, literacy and numeracy requirements

- This unit may require the ability to read and correctly interpret complex P&ID's; speak clearly and unambiguously in English; and to explain, describe and verify sometimes complex needs and issues.
- Writing is required to the level of completing workplace forms.
- Numeracy is required to the level of being able to correctly differentiate between high and low pressures and temperatures, voltages or masses.

Required knowledge:

Knowledge and understanding of the relevant OHS and environmental requirements, in particular those relating to various situations requiring work permits, with an ability to implement the requirements in a manner that is relevant to the job. Knowledge of the organisation's standard procedures and work instructions and relevant regulatory requirements along with the ability to implement them within appropriate time constraints and in a manner relevant to the job.

Sufficient knowledge of all types of permits is required to ensure work is not carried out without the correct permit. This includes recognizing hot work and confined spaces.

Knowledge of regulatory frameworks should include:

- licence requirements for the job,
- company policy and procedures
- permit control systems

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Assessment of this unit should demonstrate competence on actual plant and equipment in a work environment. The unit will be assessed in a holistic manner as is practical and may be integrated with the assessment of other relevant units of competency.

Simulation may be required to allow for assessment of parts of this unit. Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Competence must be demonstrated in the ability to distinguish between situations requiring the major types of permit and to list the major requirements of each type of permit. The emphasis should be on the ability to stay out of trouble rather than on recovery from a disaster.

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to:

- provide reasons for a permit system
- recognise the importance of different work permits
- comply with permit conditions including the wearing of appropriate personal protective equipment (PPE)
- take appropriate action to resolve faults or report faults to appropriate personnel
- explain and implement incident response procedures.

Consistent performance should be demonstrated, e.g. look to see that:

- communications are timely and effective
- deviations from permit conditions are recognised, reported, corrected and re-authorization arranged
- actions specified in the permit/standard procedures are carried out
- all safety procedures are followed.

Context of and specific resources for assessment

A holistic approach should be taken to the assessment.

Assessment will occur over a range of situations which may include disruptions to normal, smooth operation.

Competence in this unit may be assessed:

- on a plant/in the work place/a work situation
- by using a suitable simulation based on the actual plant and including walk throughs of the relevant competency components and/or a range of case studies/scenarios and role plays
- by questioning and using ‘what if’ scenarios both on the plant (during demonstration of normal operations and walk throughs of abnormal operations) and off the plant
- through a combination of these techniques.

These aspects may be best assessed using a range of simulations/scenarios/case studies and ‘what ifs’ as the stimulus with a walk through forming part of the response. These assessment activities should cover a range of problems, including new or unusual situations which may have been generated from the past incident history of the plant, incidents on similar plants around the world, hazard analysis activities and similar sources.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed. In all plants it may be appropriate to assess this unit concurrently with relevant teamwork and communication units.

While oral assessments may be appropriate there needs to be a written record for audit purposes.

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions which will be used to probe the reasoning behind the observable actions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Method of assessment

Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources

Guidance information for assessment	should include equipment modified for people with disabilities. Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.
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Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the Performance Criteria, is detailed below. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs if the candidate, accessibility of the item, and local industry and regional contexts.</p>	
<p>Codes of practice/ standards</p>	<p>Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.</p>
<p>Context</p>	<p>This unit typically applies to all work done by maintenance staff and contractors, and also to any other non-process work performed on the plant. All work is to be conducted using the appropriate personal protective equipment.</p> <p>The types of work permits may include:</p> <ul style="list-style-type: none"> • cold work/general permit to work • excavation • hot work • vehicle entry • minor repairs • working at heights • other special permits. <p>Note that entry to a confined space is covered by <i>PMPPER205B Enter confined space</i>. The Australian Standard (AS2865) definition given for confined space entry is used in this Training Package.</p> <p>All operations are performed in accordance with standard operating procedures (SOPs).</p> <p>Checks to ensure a workplace is safe may include:</p> <ul style="list-style-type: none"> • process isolations complete • mechanical and electrical isolations in place • atmospheric testing complete and atmosphere safe. If it is not safe and cannot be made safe, then appropriate measures are implemented as per SOPs. • relevant personnel informed of work and agree that it is safe and appropriate to proceed.
<p>Procedures</p>	<p>All operations are performed in accordance with procedures.</p> <p>Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards. These may include:</p>

	<ul style="list-style-type: none"> • legislation/codes • OHS legislation, codes of practice and guidance material • EPA • National and Australian standards • licence and certification requirements • internal permit control system. • process isolations complete • mechanical and electrical isolations in place • atmospheric testing complete and atmosphere safe. If it is not safe and cannot be made safe, then appropriate measures are implemented as per SOPs. • relevant personnel informed of work and agree that it is safe and appropriate to proceed.
Information required for permit	<p>Information required for a permit includes:</p> <ul style="list-style-type: none"> • work description • tools to be used • process/methods of work/SOPs • MSDSs • JHA/JSA/SWMSs
Tools and equipment	<p>This competency includes use of safety equipment and tools such as:</p> <ul style="list-style-type: none"> • eye protection (eg goggles) • ear protection • gloves • clothing • respirators and masks • helmets • safety footwear.
Hazards	<p>Typical hazards include:</p> <ul style="list-style-type: none"> • heat, smoke, dust or other atmospheric hazards • sharp edges, protrusions or obstructions • limited head spaces or overhangs • equipment or product mass • slippery surfaces, spills or leaks • noise, rotational equipment or vibration.

Problems	<p>'Respond to routine problems' means 'apply known solutions to a limited range of predictable problems'. Typical problems may include:</p> <ul style="list-style-type: none"> • provision of the wrong permit • incorrect information being supplied with the permit • errors being made in the understanding of permit data • failure to correctly correspond to the requirements of the permit • failure to seek clarification when anomalies occur.
Variables	<p>Key variables to be monitored include:</p> <ul style="list-style-type: none"> • sites under which permit activities must be applied • type of permit to be executed • types of tools and equipment to be employed • size of work team • scope and urgency of work.
Health, safety and environment (HSE)	<p><i>All operations to which this unit applies are subject to stringent health, safety and environment requirements, which may be imposed through State or Federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between performance criteria and HSE requirements, the HSE requirements take precedence.</i></p>

Unit Sector(s)

HSE

MSAPMSUP102A Communicate in the workplace

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This unit of competency covers receiving, relaying and recording written and oral messages and providing relevant information in response to requests, within time lines.

Application of the Unit

Application of this unit

This competency applies to operators who are required to receive, relay and record work related information as well as respond to information requests in the workplace.

The operator will:

- record received messages
- seek clarification, when necessary
- access needed information, as required
- relay the correct information to appropriate person/s.
-

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has **no** prerequisites.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT ELEMENT	PERFORMANCE CRITERIA Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
1. Receive and relay messages	1.1 Confirm understanding of the message is correct. 1.2 Accurately record the message. 1.3 Relay message accurately to appropriate person or section within designated timelines.
2. Interpret messages.	2.1 Clarify message if necessary. 2.2 Take appropriate action.
3. Respond to information.	3.1 Acknowledge and understand the request for information. 3.2 Access information from appropriate sources. 3.3 Relay information to appropriate person or section.
4. Complete workplace forms.	4.1 Select appropriate form. 4.2 Assemble information required for form. 4.3 Complete form as required. 4.4 Submit form as required.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit. Knowledge and ability to implement organisation policies and procedures on workplace communication, including:

- types, purpose and importance of workplace documentation
- workplace codes, including numbers, symbols, signs, colours and other codes.

Competence also includes the ability to:

- listen attentively
- formulate questions to clarify work requirements or instructions
- establish effective workplace relationship with colleagues
- adapt communication to a range of social, cultural and ethnic backgrounds.

Language, literacy and numeracy requirements

This unit requires the ability to read and understand information contained in typical workplace documents such as standard operating procedures, material safety data sheets, job cards, maintenance logs. Everyday workplace language is used, including some technical terms and mathematical language.

Writing is required to the level of completing workplace forms and records. Types of text may include short sentences, symbols, codes, signs, sketches and may be conveyed in printed form or screen based.

Basic numeracy is needed to the extent required by work instructions and procedures.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

In all cases it may be appropriate to assess this unit concurrently with relevant team work and communication units.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to:

- provide and assess all required information and that the information provided both verbally and in writing is completed in a clear and concise manner that is easily understood by others and in accordance with workplace requirements.
- apply approved procedures.

Consistent performance should be demonstrated. For example, look to see that:

- all information is provided in an efficient, effective, courteous and timely manner.

Assessment method and context

Assessment will occur on-the-job or in a simulated workplace.

Competence in this unit may be assessed:

- by observation and questioning to indicate understanding
- in a situation allowing the generation of evidence of the ability to respond to problems
- by using a suitable simulation and/or a range of case studies/scenarios
- through a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Reasonable adjustment of assessment tasks will be undertaken as required.

Specific resources for assessment

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Access must be provided to appropriate learning and/or assessment support when required.

Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This competency applies to all work environments.

Procedures

All operations are performed in accordance with procedures. Procedures include:

- all relevant workplace procedures
- work instructions
- temporary instructions
- relevant industry and government codes and standards
- telephone protocol , including industry timelines in answering calls.

Messages

Messages includes the following as appropriate to workplace requirements:

- written
- oral
- electronic.

Tools and equipment

This competency includes use of equipment and tools such as:

- two way radio
- computer
- telephone.

Problems

Respond to routine problems means 'apply known solutions to a limited range of predictable problems'. Typical problems may include:

- missing/lost messages
- required information not available
- required equipment not available
- conflict of work priorities.

Appropriate action for non-routine problems may be reporting to designated person or other action specified in the procedures.

Unit Sector(s)

Not applicable.

MSAPMSUP106A Work in a team

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This competency covers the organisation of team activities to fit in with the scheduling of work to meet operational guidelines.

Application of the Unit

Application of this unit

This competency is typically performed by people who work within a team structure with limited discretionary powers

The worker will:

- plan and organise activities in accordance with instructions
- use appropriate interpersonal skills to contribute to effective teamwork
- seek assistance from other team members where appropriate
- complete logs and reports.
-

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has **no** prerequisites.

Individual organisations may choose to add prerequisites and corequisites relevant to their processes.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT ELEMENT	PERFORMANCE CRITERIA Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
1. Identify work activities.	1.1 Identify task requirements of the team. 1.2 Identify individual tasks that are part of the team requirement. 1.3 Prioritise team and individual activities as directed.
2. Organise daily work plan.	2.1 Break work activities down into small achievable components. 2.2 Record activities as required by procedures/work instructions. 2.3 Seek assistance from other team members when difficulties in achieving allocated tasks arise.
3. Participate in a team.	3.1 Use interpersonal skills appropriate to the effective teamwork of the shift/crew/section within the workplace. 3.2 Acknowledge information and feedback provided by other team members in work group. 3.3 Acknowledge team roles and support team members in achieving their role. 3.4 Practise teamwork within and between groups to contribute to the achievement of company work standards.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Knowledge and understanding of organisation information systems, procedures and equipment sufficient to plan daily work activities in order to meet timelines.

Knowledge of organisation standard procedures and work instructions and relevant regulatory requirements, along with the ability to implement them within appropriate time constraints and in a manner relevant to the operation of the system.

Competence also includes the ability to:

- use effective communication techniques
- identify where teams fit into the organisational structure
- apply organisation quality and safety procedures
- complete required workplace documentation
- distinguish between urgent and non-urgent tasks.

Language, literacy and numeracy requirements

This unit requires the ability to read and understand typical product specifications, job sheets, procedures and work instructions, material labels and safety information as provided.

Writing is required to the level of completing workplace forms.

Basic numeracy is required to the extent required by work instructions and procedures.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to identify work activities and prioritise work in order to meet timelines, whilst interacting as a member of a group.

Consistent performance should be demonstrated. For example, look to see that:

- activities are planned in accordance with instructions
- willingness to participate as part of a team is demonstrated
- relevant procedures are accessed and utilised in completing activities
- timelines are adhered to
- assistance is sought from relevant personnel when difficulties arise.

Assessment method and context

Assessment will occur on-the-job or in a simulated workplace.

Competence in this unit may be assessed:

- by observation over time on a processing plant or in a manufacturing environment
- in a situation allowing the generation of evidence of the ability to respond to problems
- by using a suitable simulation and/or a range of case studies/scenarios
- through a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts. Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This competency applies to all work environments and sectors in the manufacturing industries.

Procedures

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Tools and equipment

This competency includes use of equipment and tools such as PPE.

Hazards

Typical workplace hazards include:

- chemicals and hazardous materials
- gases and liquids under pressure
- moving machinery
- materials handling

- working at heights, in confined spaces, or in environments subjected to heat, noise, dust or vapours.

Problems

Respond to routine problems means 'apply known solutions to a limited range of predictable problems'. Typical problems include:

- required information/materials not available
- required tool/equipment not available
- conflict of work priorities
- interpersonal conflict within the team.

Appropriate action for non-routine problems may be reported to designated person or other action specified in the procedures.

Unit Sector(s)

Not applicable.

MSAPMSUP201A Receive or despatch goods

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This competency covers the handling of materials by an operator as an adjunct to the job of making product. It applies to a limited range of materials. It is NOT intended to be an alternative warehousing competency.

This competency is typically performed by operators working either independently or as part of a work team.

Application of the Unit

Application of this unit

This competency applies to operators who receive, process despatch orders, despatch products/materials and maintain records. The key factors are correctly identifying and selecting the goods to be despatched and ensuring they are despatched to the correct location. It includes:

- checking order requests/consignment note documentation for products/materials to be despatched
- identifying and selecting the correct products/materials
- organising products/materials to be moved into the right place by the right time, using the appropriate handling equipment
- preparing products/materials for despatch
- completing and checking all documentation
- updating records.
-

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has **no** prerequisites.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT ELEMENT	PERFORMANCE CRITERIA Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
1. Identify work requirements.	1.1 Read and interpret documentation. 1.2 Identify required schedules for receipt or despatch. 1.3 Identify correct product/material. 1.4 Plan work sequence using workplace and product knowledge. 1.5 Select appropriate materials handling equipment as required. 1.6 Identify OH&S requirements.
2. Move materials into/out of storage or from production.	2.1 Check paperwork and identity of materials. 2.2 Check for completeness and/or damage. 2.3 Take action on non-conforming products/materials. 2.4 Handle and move products/materials into/out of storage safely. 2.5 Store materials safely as necessary.
3. Prepare goods for despatch.	3.1 Identify and read workplace procedures for assembling and completing orders. 3.2 Select and check goods for despatch. against product/material knowledge, labels and other identification systems. 3.3 Sort, assemble and consolidate products as necessary. 3.4 Secure order and place in storage areas, in accordance with schedule. 3.5 Check order against despatch schedule and order form.
4. Complete materials movement records.	4.1 Complete materials movement records (in or out). 4.2 Update records as required. 4.3 Complete other paperwork and records as required.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit. Knowledge and understanding of the materials handling processes and requirements sufficient to recognise non-standard situations and then determine appropriate action which is consistent with operating guidelines is required.

Knowledge is required of the product/material, its properties and uses sufficient for correct receipt, storage and despatching. Knowledge of the relevant OHS and environmental requirements is required along with an ability to implement them in a manner which is relevant to the materials handled.

Competence includes the ability to apply and/or describe:

- product/material knowledge
- inventory and ordering systems
- transport requirements and restrictions for products/materials
- correct OHS procedures
- storage/handling principles and procedures
- material hazard properties and their implications for safe handling and storage
- significance of material to customers; transport requirements and restrictions for materials
- plan own work, including predicting consequences and identifying improvements
- identify and describe own role and role of others involved directly in the processing of orders and despatching of products
- use PPE, safely handle products and materials, read relevant safety information and apply safety precautions appropriate to the task
- distinguish between causes of problems such as product requirements and job priority as relevant to the practical completion of the job.

Language, literacy and numeracy requirements

This unit requires the ability to read and interpret typical product specifications, job sheets, procedures, material labels and safety information as provided to operators.

Writing is required to the level of completing workplace forms.

Basic numeracy is required, e.g. to determine that two 25 kg bags are needed to make up a requirement for 50 kg.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the ability to recognise and analyse potential situations requiring action and then in implementing appropriate corrective action.

Consistent performance should be demonstrated. For example, look to see that:

- packaging standards are met consistently
- procedures and work instructions are read and interpreted correctly
- potential problems are recognised and action is taken (ie, the problem is fixed or reported)
- action is taken to ensure problems are dealt with in a timely manner
- problems caused by product/material issues are recognised and an appropriate contribution made to a solution
- items initiated are followed through until final resolution has occurred.
- effective communication between team members, supervisors and other staff is maintained.

Competence must be demonstrated in the operation of all ancillary equipment to the level required for this competency unit.

Assessment method and context

Assessment will occur using industrial equipment and will be undertaken in a work-like environment.

Competence in this unit may be assessed:

- by observation over time on a processing plant
- by using a suitable simulation and/or a range of case studies/scenarios
- through a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Access must be provided to appropriate learning and/or assessment support when required.

Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This competency covers the handling of a limited range of products/materials and their moving into and out of a plant/storage. It is NOT intended for people who, as a major function, operate a warehouse. The appropriate Transport and Distribution competencies should be used here.

This competency may require the operation of forklift trucks or other regulated load shifting devices which are NOT included in this competency, and so would be a co-requisite competency.

The terms order request, documentation, labels, transportation requirements 'paperwork' and 'records' mean any and all relevant information and data whether it is manual, paper based, electronic or verbal, either in person or by phone/radio.

This competency does not imply that moving materials into and from storage/plant are conducted equally, or even using similar techniques. Customers may be internal or external and the loading/unloading of products/materials may mean getting them onto/off a truck or simply from/to the next department.

Procedures

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Tools and equipment

This competency includes use of equipment and tools such as:

- mobile plant/fork lifts
- manual handling equipment
- hand tools
- shrink wrappers
- tape machine labellers
- loose bulk packing equipment.
- computers, bar code readers
- bag filling equipment
- pallets
- wrapping machines
- personal protective equipment (PPE)
- distribution equipment, including A-frames, stillages, containers, elevated platforms and communication equipment.

Hazards

Typical hazards include:

- inappropriate movements and postures
- physical and atmospheric hazards of materials
- height or depth of storage receptacles
- stationary and moving machinery, parts or components
- noise, light, energy sources
- humidity, air temperature, radiant heat
- manual handling hazards.

Problems

'Respond to routine problems' means 'apply known solutions to a limited range of predictable problems'. Typical process and product problems may include:

- special storage requirements including moisture and contamination control
- handling of incomplete loads (either in or out)
- handling of materials which do not meet specifications
- conflicting priorities
- incomplete or incorrect paperwork.
- product requirements
- job priority
- product/material variations.

Variables

Key variables to be monitored include:

- types of products or materials to be received/despached
- handling heights
- types of equipment
- types of workplace documentation
- atmospheric conditions.
-

Unit Sector(s)

Not applicable.

MSAPMSUP240A Undertake minor maintenance

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This unit applies to operators who are involved in providing basic maintenance and the resolving of routine problems to procedures. It does not cover activities normally requiring traditional trade training.

Application of the Unit

Application of this unit

In a typical scenario a plant operator does minor maintenance activities on the plant and equipment being operated. For instance the pressure drop across a filter unit may be high, indicating the filter cartridge needs changing. The operator takes the filter unit out of operation, cleans the unit, uses the correct spanner to open the lid, installs a fresh cartridge, closes the unit using the spanner again, then cleans up the area and disposes of the spent cartridge. Typically this sort of maintenance will be done on the plant and will not require workshop type facilities.

The operator will:

- be aware of and contribute to a safe working environment
- identify and check equipment for faults
- perform basic maintenance to procedures
- complete logs and reports.
-

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has **no** prerequisites.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT ELEMENT	PERFORMANCE CRITERIA Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
1. Identify maintenance requirements.	1.1 Identify equipment variations/irregularities using observed data and plant records. 1.2 Assess the urgency/priority of the situation. 1.3 Identify appropriate corrective action. 1.4 Identify correct tools and materials. 1.5 Assess the impact of the maintenance activity and communicate to appropriate personnel. 1.6 Identify hazards and risk controls. 1.7 Identify work permit requirements.
2. Prepare for maintenance activity.	2.1 Ensure equipment is turned off and isolated as required. 2.2 Clear the area of obstructions and hazardous materials. 2.3 Obtain appropriate tools, parts, materials and procedures. 2.4 Obtain the appropriate work permits and adhere to the requirements. 2.5 Communicate the impending maintenance activity to the appropriate personnel.
3. Perform maintenance activity.	3.1 Access all relevant information. 3.2 Undertake maintenance activity according to procedures. 3.3 Use tools and maintenance techniques correctly. 3.4 Restore equipment to normal working condition. 3.5 Leave the work area in a clean and safe condition. 3.6 Ensure permits are signed off as appropriate.
4. Test equipment.	4.1 Test equipment according to procedures. 4.2 Return equipment to service. 4.3 Ensure equipment meets normal operating requirements.
5 Record maintenance activity.	5.1 Complete maintenance logs/plant history records. 5.2 Report maintenance activity to relevant personnel. 5.3 Identify and report outstanding maintenance requirements to relevant personnel.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit. Knowledge and understanding of equipment operation and maintenance practices sufficient to recognise fault and no-fault conditions in standard and non-standard situations and then determine appropriate action which is consistent with operational guidelines is required. Knowledge of organisation procedures and relevant regulatory requirements along with the ability to implement them within appropriate time constraints and work standards. Application of the knowledge of managing risks using the hierarchy of controls applied to the process. Application of approved hazard control, safety procedures, use of PPE in relation to handling materials, equipment operation and clean up.

Knowledge as a basis for solving maintenance problems, including:

- principles of operation of the equipment to be maintained
- function and troubleshooting of major internal components and their problems
- appropriate testing procedures and use of equipment for a range of equipment faults
- typical causes of equipment failures and the service conditions which may increase maintenance
- types and nature of maintenance (preventative, predictive, corrective) uses, benefits and limitations
- urgency and timeliness factors in maintenance
- maintenance planning/scheduling/records systems
- identification of tools, materials and spare parts
- basic techniques for using and handling tools
- physical measurement, alignment and clearance principles.

Competence also includes the ability to:

- plan own work, including predicting consequences and identifying improvements
- identify factors which may affect product quality or production output and appropriate remedies
- identify when the operator is able to rectify faults and when assistance is required.

Language, literacy and numeracy requirements

This unit requires the ability to read and interpret typical equipment specifications schematics and diagrams.

Writing is required to the level of completing workplace forms and production reports.

Basic numeracy is required, to interpret plant data and maintenance schedules.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

Where the completion of this unit requires working under a permit/clearance, then competency must also be established in *PMAAPER200C Work in accordance with an issued permit*, or other appropriate unit.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to:

- understand the procedures and know the importance of critical operational systems
- recognise potential situations requiring action and then implement appropriate action.

Consistent performance should be demonstrated. For example, look to see that:

- early warning signs of equipment in need of attention/with potential problems are recognised
- appropriate equipment tests are undertaken and analysed appropriately
- proposals for equipment repair are based upon the most appropriate and cost effective method to return equipment to full performance in a timely manner
- maintenance activities are completed safely and to procedures.

Assessment method and context

Assessment will occur on industrial equipment and will be undertaken in a work-like environment.

Competence in this unit may be assessed:

- on a processing plant, allowing for operation under all normal and a range of abnormal conditions
- in a situation allowing the generation of evidence of the ability to respond to problems
- by using a suitable simulation and/or a range of case studies/scenarios
- through a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This competency applies to all work environments and sectors within the industry. It does not include maintenance that would require trade level skills. It is not intended that this competency would cover maintenance that is carried out in a workshop.

Procedures

All operations are performed in accordance with procedures.

Procedures mean all relevant workplace procedures, work instructions, temporary instructions, standard operating procedures, plant description manuals, manufacturer instructions, specifications, service manuals, machine circuit diagrams for hydraulic/pneumatic and electrical/electronic circuits and relevant industry and government codes and standards.

Maintenance activities

This competency unit includes minor maintenance such as the following:

- operational maintenance (eg connection-disconnection of hoses, greasing, lubrication and lubricant systems, adjusting sealing glands, cleaning and changing filters, 'nipping up' flanges)
- general cleaning
- removal and replacement (eg gland packing, changing blades or cutters, replacing gaskets, replacing /maintaining seals, changing filter elements, servicing strainers).

Tools and equipment

This competency includes use of equipment and tools such as:

- hand tools
- specialised tools
- measuring and aligning equipment.

Hazards

Typical hazards include:

- rotating and moving machinery
- process materials, solids, liquids and gases under pressure or flowing
- hot surfaces or materials
- temporary connections or by-passes
- electrical, hydraulic or pneumatic energy sources
- out of specification operation.

Problems

Respond to/rectify 'non-routine problems' means 'apply known solutions to a variety of predictable problems'. Typical process and product problems may include:

- out-of-specification product or variations
- response of equipment to materials variations
- equipment in need of maintenance.

Variables

Key variables to be monitored include:

- equipment performance (eg speed, output, variations)
- equipment component performance
- sequences and timing of operations
- materials changes (desired and not desired).

Data and Records

Typical information sources, observed data and plant records may include:

- plant data
- log sheets
- operational and performance reports
- physical aspects such as noise, smell, feel and pressure condition monitoring information
- planned maintenance schedules
- procedures
- manufacturer specifications, instructions, service manuals and other information.
-

Unit Sector(s)

Not applicable.

MSAPMSUP273A Handle goods

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This competency covers the handling of materials by an operator as an adjunct to the job of making product. It applies to a limited range of materials. It is NOT intended to be an alternative warehousing competency.

Application of the Unit

Application of this unit

This competency applies to operators who receive or despatch goods from either internal or external sources. The key factors are checking and inspecting goods for conformity to documentation. This competency is typically performed by operators working either independently or as part of a work team. It includes:

- reading and interpreting receipt documentation
- identifying and following procedures for checking goods
- identifying and reporting non-conforming goods
- completing workplace documentation.

This unit does not cover the use of forklift trucks or other load shifting devices. See *PMSUP205A Transfer loads* or *TDTD1097 Operate a forklift* as appropriate.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has **no** prerequisites.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT ELEMENT	PERFORMANCE CRITERIA Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.
1. Identify requirements.	1.1 Interpret order/paperwork. 1.2 Check and take action on special requirements as needed. 1.3 Check identity of materials. 1.4 Check for completeness and damage. 1.5 Take action on non-conforming materials/loads.
2. Move materials to/from storage/production.	2.1 Select items to be moved based on job requirements and procedures/work instructions. 2.2 Load materials according to standard procedures. 2.3 Move materials as needed. 2.4 Store/place materials safely.
3. Complete documentation.	3.1 Complete material movement records. 3.2 Update stock records as required. 3.3 Complete other paperwork and records as required.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit.

Knowledge of goods and materials sufficient to recognise variance from specifications and then determine appropriate action that is consistent with operating guidelines.

Knowledge of organisation procedures and relevant regulatory requirements along with the ability to implement them within appropriate time constraints and work standards.

Competence includes the ability for the practical completion of the job to:

- apply and/or explain procedures for receiving/despatch of goods, and reconciliation of orders and invoices
- apply and/or describe:
 - storage/handling principles and procedures
 - material hazard properties and their implications for safe handling and storage
 - significance of material to customers
 - transport requirements and restrictions for materials.
- plan own work, including predicting consequences and identifying improvements
- identify when the operator is able to rectify problems, when assistance is required and who is the appropriate source for assistance
- identify and describe own role and role of others involved directly in the receiving of goods
- use PPE, safely handle products and materials, read relevant safety information and apply safety precautions appropriate to the task
- distinguish between causes of problems such as incorrect/incomplete paperwork; wrong goods.

Language, literacy and numeracy requirements

This unit requires the ability to read and interpret typical product specifications, job sheets, procedures, material labels and safety information as provided to operators.

Writing is required to the level of completing workplace forms.

Basic numeracy is required, eg to determine that two 25 kg bags are needed to make up a requirement for 50 kg.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to

- recognise the importance of material properties and qualities
- apply approved procedures
- take appropriate action to resolve problems or report problems to appropriate personnel.

Consistent performance should be demonstrated. For example, look to see that

- upstream and downstream communication is timely and effective
- procedures and work instructions are read and interpreted correctly
- problems are identified and appropriate action is taken (ie, the problem is fixed or reported)
- all safety procedures are followed.

Assessment method and context

Assessment will occur using industrial goods and will be undertaken in a work-like environment

Competence in this unit may be assessed:

- on a processing plant, allowing for operation under all normal and a range of abnormal conditions
- by using a suitable simulation and/or a range of case studies/scenarios
- through a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This competency applies to operators working either independently or as part of a work team.

Procedures

All operations are performed in accordance with procedures.

Procedures means all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Tools and equipment

This competency includes use of equipment and tools such as:

- goods identification numbers and codes
- manifests
- picking slips, merchandising transfers, stock requisitions and bar codes
- manufacturer specifications
- supplier and/or client instructions.

Hazards

Typical hazards include:

- stationary and moving machinery, parts or components
- noise, light, energy sources
- humidity, air temperature, radiant heat.

Problems

'Respond to routine problems' means 'apply known solutions to a limited range of predictable problems'. Typical process and product problems may include:

- incorrect goods delivered
- incomplete orders and shipments
- inappropriate packaging
- wrong or incomplete labling
- incomplete or incorrect paperwork
- special storage requirements including moisture and contamination control
- handling of incomplete loads (either in or out)
- handling of materials which do not meet specifications
- resolving conflicting priorities
- ensuring the correct material arrives at the correct place at the right time.

Variables

Key variables to be monitored include:

- compliance with 'receiving' procedures
- appropriate handling of incoming goods
- completion of documentation
- condition of packaging and lifting or moving locations
- availability of lifting/moving equipment
- unloading practices
- variations in provider documentation.
-

Unit Sector(s)

Not applicable.

MSAPMSUP383A Facilitate a team

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This competency covers the identification of team's goals and timelines, negotiating with the team to allocate tasks and ensuring the goals and timelines are met.

Application of the Unit

Application of this unit

This competency is typically performed by team leaders/operators who work within a team structure and are responsible for coordinating team functions within designated goals. It also requires the use of a range of well developed skills requiring some discretion and judgement to recognise and resolve a range of problems/conflict.

The team leader will:

- collect, analyse and organise information
- communicate ideas and information
- plan and organise activities
- work within a team
- use mathematical ideas and techniques
- solve problems
- use technology.
-

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit of competency has **no** prerequisites.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT ELEMENT	PERFORMANCE CRITERIA Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.
1. Identify tasks to achieve team goals.	1.1 Identify and agree on team goals, with team members input. 1.2 Identify tasks required to achieve team goals. 1.3 Identify team and individual safety responsibilities. 1.4 Allocate responsibilities of individuals within the team. 1.5 Ensure designated team goals are met by identifying strategies and timelines required to complete each task.
2. Organise allocation of tasks.	2.1 Estimate time and resources needed to complete tasks. 2.2 Identify competencies of individual team member and allocate/negotiate individual responsibilities. 2.3 Agree timelines for completion of each task. 2.4 Identify resources and support necessary for completion of job.
3. Monitor completion of allocated tasks.	3.1 Measure team performance against its goals. 3.2 Monitor individual compliance with procedures and take action as required. 3.3 Check at regular intervals that agreed timelines for completion of tasks are being met. 3.4 Negotiate alternative strategies to achieve allocated tasks when designated timelines are not being met. 3.5 Provide support to colleagues to ensure completion of allocated tasks.
4. Resolve conflicts between team members.	4.1 Identify conflict situations between team members. 4.2 Identify causes of conflict. 4.3 Implement conflict resolution procedures relevant to the level of conflict and to established practices. 4.4 Seek assistance as required to ensure conflict resolution.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit. Application of knowledge and understanding of the system sufficient to indicate understanding and knowledge of negotiating with team members to allocate and complete tasks to achieve team goals.

Knowledge of organization procedures, quality requirements and relevant regulatory requirements along with the ability to implement them within appropriate time constraints and work standards.

Application of the knowledge of managing risk using the hierarchy of controls applied to the manufacture of products. Application of approved hazard control and safety procedures and the use of PPE in relation to handling materials, equipment operation and clean up.

Knowledge as a basis for solving problems, including:

- effective use of teamwork
- impact of individual team member strengths/weaknesses/competencies on the allocation of responsibilities
- OHS roles and responsibilities of the individual and the team
- effective use of workplace documentation
- teamwork strategies
- working to timelines
- allocation of tasks
- health, safety and environment obligations of employers and employees imposed by the relevant legislation.

Competence includes the ability to:

- plan own work, including predicting consequences and identifying improvement
- identify and describe own role and role of others involved in the team
- identify team and individual goals relevant to the practical operation of the system
- identify team, section and organisation goals relevant to the practical operation of the system.

Language, literacy and numeracy requirements

This unit requires the ability to read and understand typical procedures and work instructions, plant drawings and safety information as provided to operators.

Writing is required to the level of completing workplace forms, quality assurance records and production reports.

Basic numeracy is required to the extent required by work instructions and procedures.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit.

These may include the ability to:

- identify and prioritise work activities
- negotiate and monitor work activities
- understand the impact of individual tasks on the completion of team objectives
- allocate and oversee that tasks are completed safely and within timelines
- ensure relevant procedures are followed and used when completing activities
- identify and take appropriate action on problems or potential problems.

Consistent performance should be demonstrated. For example, look to see that:

- willingness to participate as part of a group is demonstrated
- support is sought from and given to colleagues to achieve team objectives
- all safety procedures are always followed.

Assessment method and context

Assessment will occur in work-like environment.

Competence in this unit may be assessed:

- in a situation allowing the generation of evidence of the ability to recognise, anticipate and solve problems
- by using a suitable simulation and/or a range of case studies/scenarios
- through a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Access must be provided to appropriate learning and/or assessment support when required.

Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts. Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

This competency applies to all work environments and sectors in the industries.

Procedures

All operations are performed in accordance with procedures.

Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Problems

Anticipate and solve problems means resolve a wide range of routine and non-routine problems, using product and process knowledge to develop solutions to problems which do not have a known solution / a solution recorded in the procedures.

Typical problems may include:

- required information/materials not available
- required tool/equipment not available
- conflicting priorities
- short timeframe.

Variables

This competency unit may vary according to organization use of the following information sources and documentation:

- procedures/work instructions
- materials safety data sheets
- job cards
- maintenance logs
- plant drawings.

Key variables to be monitored include:

- type of communication used within each organisation
- established work practices/policies
- size and structure of the team/organisation
- group goals - individual, team and organisation
- organisation specific conflict resolution procedures.
-

Unit Sector(s)

Not applicable.

MSAPMSUP390A Use structured problem solving tools

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This competency covers the solving of process and other problems, beyond those associated directly with the process unit/equipment, using structured process improvement tools to identify improvements and/or solve problems.

Application of the Unit

Application of this unit

The competency is typically performed by an experienced operator, team leader or supervisor. Generally the person would be part of a team during the solving of complex or systemic problems and would be expected to perform all parts of this unit and at all times would be liaising and cooperating with other members of the team. This includes:

- using a range of formal problem solving techniques
- identifying and clarifying the nature of the problem
- devising the best solution
- evaluating the solution
- developing an implementation plan to rectify the problem.

This unit does not cover the solving of problems undertaken as part of the operator's normal role which is covered in the relevant operation competency unit.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

This unit has **no** prerequisites.

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

ELEMENT	PERFORMANCE CRITERIA
Elements describe the essential outcomes of a unit of competency	Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT ELEMENT	PERFORMANCE CRITERIA
1. Identify the problem.	<p>Performance Criteria describe the required performance needed to demonstrate achievement of the Element. Assessment of performance is to be consistent with the Evidence Guide.</p> <p>1.1 Identify variances from normal operating parameters and product quality.</p> <p>1.2 Define the extent, cause and nature of the problem by observation and investigation.</p> <p>1.3 State and specify the problem clearly.</p>
2. Determine fundamental cause of problem.	<p>2.1 Identify possible causes based on experience and the use of problem solving tools/analytical techniques.</p> <p>2.2 Develop possible cause statements.</p> <p>2.3 Identify fundamental cause.</p>
3. Determine corrective action.	<p>3.1 Consider all possible options for resolution of the problem.</p> <p>3.2 Consider strengths and weaknesses of possible options.</p> <p>3.3 Determine corrective action to remove the problem and possible future causes.</p> <p>3.4 Develop implementation plans identifying measurable objectives, resource needs and timelines in accordance with safety and operating procedures.</p> <p>3.5 Develop recommendations for ongoing monitoring and testing.</p>
4. Communicate recommendations.	<p>4.1 Prepare report on recommendations.</p> <p>4.2 Present recommendations to appropriate personnel.</p> <p>4.3 Follow up recommendations if required.</p>

Required Skills and Knowledge

This describes the essential skills and knowledge and their level required for this unit. Competence includes a thorough knowledge and understanding of the process, normal operating parameters, and product quality to recognise non-standard situations.

This unit of competency includes use of analytical techniques in problem solving such as:

- brainstorming
- fishbone diagrams/cause and effect diagrams
- process logic/process requirements
- logic tree
- similarity/difference analysis
- Pareto analysis
- force field/SWOT analysis
- flow charts
- control charts, runcharts and graphs
- scattergrams.

Action plans to solve problems are prepared including:

- priority requirements
- measurable objectives
- resource requirements
- methods for reaching objectives
- timelines
- coordination and feedback requirements
- safety requirements
- risk assessment
- environmental requirements.

Language, literacy and numeracy requirements

This unit requires the ability to read and interpret typical product specifications, job sheets and material labels as provided to operators.

Writing is required to the level of report writing and completing workplace forms.

Basic numeracy is also required, eg to interpret quality data and graphs.

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, required skills and knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

Overview of assessment

A holistic approach should be taken to the assessment.

Assessors must be satisfied that the person can consistently perform the unit as a whole, as defined by the Elements, Performance Criteria and skills and knowledge.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to apply and explain:

- relevant equipment and operational processes
- enterprise policies and procedures
- enterprise goals, targets and measures
- enterprise quality, OHS and environmental requirements
- principles of decision-making strategies and techniques
- enterprise information systems and data collation
- industry codes and standards.

Consistent performance should be demonstrated. For example, look to see that:

- problems are recognised and clarified
- possible causes are identified, based on experience and use of analytical techniques in solving the problem, including:
 - identifying variations
 - identifying cause and effect
 - separating single problems from multiple problems
 - recognising recurring problems.
- fundamental cause of process or equipment faults is determined
- corrective/preventative implementation plans are developed to avoid recurrence of the problem
- implementation plan is presented to relevant personnel.

Assessment method and context

Assessment will occur on the job or in a simulated workplace.

Competence in this unit may be assessed:

- in a situation allowing the generation of evidence of the ability to recognise and respond to problems
- by using a suitable simulation and/or a range of case studies/scenarios
- through a combination of these techniques.

In all cases it is expected that practical assessment will be combined with targeted questioning to assess the underpinning knowledge and theoretical assessment will be combined with appropriate practical/simulation or similar assessment. Assessors need to be aware of any cultural issues that may affect responses to questions.

Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the assessee and the work being performed.

Specific resources for assessment

This section should be read in conjunction with the Range Statement for this unit of competency. Resources required include suitable access to an operating plant or equipment that allows for appropriate and realistic simulation. A bank of case studies/scenarios and questions will also be required to the extent that they form part of the assessment method. Questioning may take place either in the workplace, or in an adjacent, quiet facility such as an office or lunchroom. No other special resources are required.

Access must be provided to appropriate learning and/or assessment support when required.

Where applicable, physical resources should include equipment modified for people with disabilities.

Range Statement

RANGE STATEMENT

The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts. Where reference is made to industry codes of practice, and/or Australian/international standards, the latest version must be used.

Context

The competency unit applies to a wide range of processes and equipment. The process manufacturing technical units of competency include a problem solving element where problems specific to that competency unit are to be resolved. This competency unit is where structured problem solving techniques are to be applied more broadly, or with greater depth/rigour than is implied by the problem solving element of the technical units. In large plants or manufacturing organisations with multiple processes, it may apply to more than one process if those processes interact with each other. It applies to all operators across all functions.

Procedures

All operations are performed in accordance with procedures. Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Hazards

Typical hazards include leaks, spillages and equipment hazards that can occur during the walk-through of a plant.

Problems

'Anticipate and solve problems' means resolve a wide range of routine and non-routine problems, using product and process knowledge to develop solutions to problems which do not have a known solution/a solution recorded in the procedures.

Typical process and product problems may include:

- non- routine process and quality problems
- equipment selection, availability and failure
- teamwork and work allocation problems
- safety and emergency situations and incidents.
-

Unit Sector(s)

Not applicable.

PSPPROC602A Direct the management of contracts

Modification History

Not applicable.

Unit Descriptor

This unit covers strategic management of contracts to effectively minimise risks and achieve value for money to meet an organisation's core objectives.

This unit covers strategic management of contracts to effectively minimise risks and achieve value for money to meet an organisation's core objectives

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Manage the transition to a new contract	1.1 The requirements of the contract are discussed, clarified, and agreed by all parties 1.2 Responsibilities for establishing and carrying out

- procedures are assigned to achieve contract outcomes
- 1.3 Transition arrangements are confirmed and implemented
 - 1.4 Effective communication strategies and processes are established and implemented to assist ongoing communication between stakeholders and suppliers
 - 1.5 Effective performance measures are established
 - 1.6 Risk management plan is updated in accordance with organisational policy and procedures
- 2 Manage the performance of the contract
- 2.1 Progress of the contract is monitored against set targets and performance measures to ensure success of the procurement activity
 - 2.2 Should monitoring find that set targets and performance measures are not being met, action is taken to rectify performance in a timely manner
 - 2.3 Advice and support are provided to solve problems, make improvements and maintain progress
 - 2.4 Opportunities to improve procurement outcomes are sought and negotiated with suppliers
 - 2.5 Any contract variation is negotiated in accordance with the terms of the contract and organisational policy and procedures
 - 2.6 Contract variations agreed between the parties are documented and approvals gained
 - 2.7 Opportunities are provided for stakeholders and suppliers to have input to and receive feedback on progress during the performance of the contract
- 3 Manage the evaluation of the contract
- 3.1 Evaluation of contract performance is undertaken relative to planned performance measures and in consultation with stakeholders and suppliers
 - 3.2 Conclusions are detailed against agreed criteria and provide a complete picture of performance of the supplier, the organisation's procurement processes and value for money
 - 3.3 Evaluation outcomes are documented in

accordance with organisational requirements to assist improvement in future procurement activities

- 3.4 Suppliers and stakeholders are advised of evaluation outcomes in a timely manner in accordance with organisational guidelines

Required Skills and Knowledge

Not applicable.

Evidence Guide

This Evidence Guide must be read in conjunction with the Assessment Guidelines for the National Public Services Training Package.

Critical aspects of evidence

integrated demonstration of all elements and their related performance criteria; and transition, performance and evaluation of contracts
relevant legislation and procedures applied to the procurement process

Interdependent assessment of units

Pre-requisite units: Nil

Co-requisite units: Nil

Co-assessed units: This unit may be co-assessed with any of the generalist public sector specific units at Diploma level or above. It is recommended that co-assessment occurs with some or all of the following units: PSPETHC501A Promote the Values and Ethos of Public Service; PSPLEGN501A Promote Compliance with Legislation in the Public Sector; PSPPOLI501A Manage Policy Implementation; PSPGOV501A Apply Knowledge of Government Systems; and PSPMNGT605A Manage Diversity

Underpinning knowledge

Commonwealth, State/Territory, Local Government procurement guidelines
procurement policies and practices
government procurement environment
financial rules and regulation requirements
legal requirements of government contracting
implications of particular contracting agreements
whole-of-life considerations
disposals considerations
procurement approval processes
strategic planning processes
procurement management processes
Law of contract
Trade practices law
Commercial law and relevant legislation
equal employment opportunity, equity and diversity principles
financial and accounting issues relevant to the contract

Underpinning skills

project management skills
financial and other resources management skills
communication skills, orally and in writing
cross-cultural competency, including gender and disability
research skills
analytical skills
problem solving using conceptual and reasoning skills
networking skills with clients, suppliers, stakeholders and end users

Resource implications

assessment may involve reports from supervisors and/or managers, reports from team members and references from clients

Consistency of performance

evidence to be gathered over time across a range of variables

Context/s of assessment

this competency may be assessed on-the-job or in a simulated work environment; holistic assessment; assessment by way of documented information and/or examples of personal work
This Evidence Guide must be read in conjunction with the Assessment Guidelines for the National Public Services Training Package.

Critical aspects of evidence

integrated demonstration of all elements and their related performance criteria; and transition, performance and evaluation of contracts
relevant legislation and procedures applied to the procurement process

Interdependent assessment of units

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Underpinning knowledge

Commonwealth, State/Territory, Local Government procurement guidelines
procurement policies and practices
government procurement environment
financial rules and regulation requirements
legal requirements of government contracting
implications of particular contracting agreements
whole-of-life considerations
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strategic planning processes
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Trade practices law
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equal employment opportunity, equity and diversity principles
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Consistency of performance

evidence to be gathered over time across a range of variables

Context/s of assessment

this competency may be assessed on-the-job or in a simulated work environment; holistic assessment; assessment by way of documented information and/or examples of personal work

Range Statement

The Range of Variables provides information about the context in which the unit of competency is carried out. It allows for differences between States and Territories and the Commonwealth, and between organisations and workplaces. It allows for different work requirements, work practices, and knowledge. The Range of Variables also provides a focus for assessment and relates to the unit as a whole.

Stakeholders may include:

- end users, customers or clients and sponsors
- potential providers or suppliers
- current providers/suppliers
- technical or functional experts or advisers
- federal, state/territory and/or local government
- the organisation
- other public sector organisations
- employees
- unions or staff associations
- industry bodies
- local communities and society as a whole
- lobby groups, special user groups

Monitoring may involve:

- progress meetings
- visits to the supplier's premises
- provision of samples
- regular progress reports from the supplier
- independent audit
- end user feedback

Evaluation of supplier performance may include:

- strengths and weaknesses
- client acceptance of service delivery (client satisfaction)
- achievements in meeting delivery and completion dates
- compliance with other contractual requirements
- performance in relation to relevant policy objectives such as industry development, care for the environment, occupational health and safety, and affirmative action
- achievement of the supplier in developing Australian and New Zealand supply networks
- general relationships including effectiveness of communication at all levels
- performance of key technical personnel
- acceptability and cost of whole of life technical support including lead times and availability of spares and maintenance services
- achievements in innovation and quality improvement programs
- acceptability and suitability for future agreements including potential status as an approved supplier

Evaluation of the organisation's procurement processes may focus on:

- effectiveness of project management including the project plan and the responsibilities and accountabilities set out in it
- quality of the business case, as indicated by the achievement of planned outcome and the contribution to program objectives
- effectiveness of supplier qualification processes

value obtained in bid clarification and post-tender negotiation
effectiveness of project management systems focusing particularly on management information
effectiveness of risk management
methods for controlling variations in cost, time, quality and performance from the initial planning to completion
adequacy of safeguards against fraud, error and impropriety
incidence of material losses due to waste or inefficiency
overall performance in terms of cost, time, service and quality

Contract variation may include:

modification of targets, performance measures, procurement plans, resourcing, monitoring and evaluation processes

Value for money must reflect:

whole of life program benefits
residual values
costs of parts
servicing and maintenance
industry benchmarks

The Range of Variables provides information about the context in which the unit of competency is carried out. It allows for differences between States and Territories and the Commonwealth, and between organisations and workplaces. It allows for different work requirements, work practices, and knowledge. The Range of Variables also provides a focus for assessment and relates to the unit as a whole.

Stakeholders may include:

end users, customers or clients and sponsors
potential providers or suppliers
current providers/suppliers
technical or functional experts or advisers
federal, state/territory and/or local government
the organisation
other public sector organisations
employees
unions or staff associations
industry bodies
local communities and society as a whole
lobby groups, special user groups

Monitoring may involve:

progress meetings
visits to the supplier's premises
provision of samples
regular progress reports from the supplier
independent audit
end user feedback

Evaluation of supplier performance may include:

strengths and weaknesses
client acceptance of service delivery (client satisfaction)
achievements in meeting delivery and completion dates
compliance with other contractual requirements

performance in relation to relevant policy objectives such as industry development, care for the environment, occupational health and safety, and affirmative action
achievement of the supplier in developing Australian and New Zealand supply networks
general relationships including effectiveness of communication at all levels
performance of key technical personnel
acceptability and cost of whole of life technical support including lead times and availability of spares and maintenance services
achievements in innovation and quality improvement programs
acceptability and suitability for future agreements including potential status as an approved supplier

Evaluation of the organisation's procurement processes may focus on:

effectiveness of project management including the project plan and the responsibilities and accountabilities set out in it
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effectiveness of risk management
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adequacy of safeguards against fraud, error and impropriety
incidence of material losses due to waste or inefficiency
overall performance in terms of cost, time, service and quality

Contract variation may include:

modification of targets, performance measures, procurement plans, resourcing, monitoring and evaluation processes

Value for money must reflect:

whole of life program benefits
residual values
costs of parts
servicing and maintenance
industry benchmarks

Unit Sector(s)

Not applicable.

SIRRMER009A Produce perspective drawing, plans and elevations

Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit describes the performance outcomes, skills and knowledge required to produce perspective drawings, plans and elevations in retail or exhibition environments in response to client briefs.

Application of the Unit

Application of the unit This unit requires the team member to demonstrate knowledge of manual or software-based drafting techniques to develop and present a folio of perspective drawings, plans and elevations in response to a client brief. Frontline visual merchandisers and visual merchandiser supervisors and managers are responsible for this role.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills The required outcomes described in this unit contain applicable facets of employability skills. The Employability Skills Summary of the qualification in which this unit is packaged will assist in identifying employability skills requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Produce one-point perspective visuals from a given plan and elevation.	1.1 Interpret plan and elevation and determine suitable scale.
	1.2 Construct one-point grid of interior space delineating scale representations of floor, walls and ceiling using appropriate <i>manual drafting tools and equipment</i> or <i>computer software</i> .
	1.3 Position objects correctly in given space according to the given plan.
	1.4 Determine correct heights of objects within the space from provided elevations.
2 Produce two-point perspective visuals from a given plan and elevation.	2.1 Construct two-point grid of interior space, indicating scale representations of floor, walls and ceiling.
	2.2 Produce visuals of walls and ceiling to specified proportions according to given plans and elevations.
	2.3 Draw accurate scale heights of objects and architectural details according to specifications in elevations.

ELEMENT	PERFORMANCE CRITERIA
	<p>2.4 Position objects to match plans.</p> <p>2.5 Render interiors produced in a colour finish scheme suitable for the presentation of the organisation and product.</p>
<p>3 Produce multi-point perspective from given industry briefs.</p>	<p>3.1 Determine suitable view of plan and elevation for <i>client</i> presentation and to best represent requirements of the brief.</p> <p>3.2 Draft perspective and rendered interior views according to given plans and elevations.</p> <p>3.3 Produce alternative design solutions to meet client needs.</p> <p>3.4 Present progress solutions to client for feedback.</p> <p>3.5 Draft design modifications and present portfolio of finished visuals for client sign-off.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

The following skills must be assessed as part of this unit:

- interpersonal communication skills to:
 - present verbally to client through clear and direct communication
 - share information
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
- use and maintenance of retail drafting tools and equipment
- manual drafting and drawing
- the application of computer software as an aid in the production of finished visuals
- developing written reports
- compiling a portfolio.

The following knowledge must be assessed as part of this unit:

- elements and principles of design and trends in retail visual merchandising design
- perspective in visual merchandising design applications
- relevant organisation or industry standards
- organisation merchandising policy.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- utilises relevant research on visual merchandising and architectural design trends
- negotiates and confirms client requirements for a range of visual merchandising design briefs
- consistently selects and applies appropriate drafting and drawing tools
- compiles portfolios, including alternative solutions offered via written reports and finished visuals
- makes verbal presentations to support the presentation of concept visuals
- plans, coordinates and implements activities associated with the brief in order to meet client timelines
- evaluates client feedback and makes modifications as required
- documentary evidence of consultative and liaison processes with business partners.

Context of and specific resources for assessment

Assessment must ensure access to:

- real or simulated retail outlets or exhibition environments
- drafting equipment and facilities
- relevant documentation, such as:
 - real or simulated client briefs
 - texts and visual merchandising and architectural periodicals.

EVIDENCE GUIDE

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- review of a portfolio of perspective drawings plans and elevations developed in response to a brief
- third-party reports from a supervisor
- client feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Assessing employability skills

Employability skills are integral to effective performance in the workplace and are broadly consistent across industry sectors. How these skills are applied varies between occupations and qualifications due to the different work functions and contexts.

Employability skills embedded in this unit should be assessed holistically in the context of the job role and with other relevant units that make up the skill set or qualification.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

RANGE STATEMENT

Manual drafting tools and equipment may include:

- T-square
- scale rule
- set squares
- blades
- HB and harder pencils
- coloured pencils
- dry pastels
- Copic markers
- fine-line pens.

Computer software may include:

- Illustrator
- DesignCAD products.

Clients may include:

- Customers may include retail managers within the organisation or external businesses.

Unit Sector(s)

Sector Retail

Competency field

Competency field Merchandising

SIRRMER020A Create and implement exhibition space

Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit describes the performance outcomes, skills and knowledge required to design and implement displays in exhibition spaces.

Application of the Unit

Application of the unit This unit requires the team member to apply knowledge of project planning to negotiate client requirements, assess the specific design requirements of exhibitions, develop sketches and concept drawings, arrange relevant suppliers, and install and bump out exhibition displays.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills The required outcomes described in this unit contain applicable facets of employability skills. The Employability Skills Summary of the qualification in which this unit is packaged will assist in identifying employability skills requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Assess the specific design requirements of exhibitions.	1.1 Interpret and negotiate the <i>client</i> brief.
	1.2 Assess the requirements of the exhibition according to the final brief and develop an <i>event checklist</i> .
2 Produce sketches and rendered concept drawings.	2.1 Produce and refine sketches drawings, including rendered perspectives, elevations and in situ illustrations of the exhibition.
	2.2 Develop finished plans providing solutions to given briefs via a series of design variations.
	2.3 Develop the exhibition proposal, including a detailed report and recommendations.
	2.4 Negotiate and adjust the final exhibition design to the satisfaction of the client.
	2.5 Develop working construction and detail drawings to match job specifications.

ELEMENT	PERFORMANCE CRITERIA
	2.6 Incorporate <i>safety and risk assessments</i> into all planning.
3 Source audio and lighting suppliers and products.	3.1 Research suppliers and contractors required to fulfil the exhibition design. 3.2 Brief contractors and suppliers on precise requirements. 3.3 Coordinate supply of products and services to ensure timely and successful completion of the exhibit.
4 Design, install and bump out display.	4.1 Assess and arrange staffing requirements for each phase according to the designated event checklist. 4.2 Determine <i>specific operations for installation</i> from construction, packing, transportation, on-site and installation services. 4.3 Identify strategic objectives and time schedules, and delegate display installation and bump out according to the display plan and designated event checklist. 4.4 Coordinate bump out of display according to the designated event checklist.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

The following skills must be assessed as part of this unit:

- interpersonal communication skills to:
 - negotiate client brief and final design
 - brief contractors and suppliers through clear and direct communication
 - ask questions to identify and confirm requirements
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
- creative thinking skills
- planning skills
- team skills
- collaboration and negotiation skills
- design application
- illustrative and model making skills
- verbal presentation skills.

The following knowledge must be assessed as part of this unit:

- merchandising styles and layouts
- the differences between retail and exhibition merchandising
- venue regulations regarding exhibition merchandising
- national and global trends in exhibition design, product presentation and promotional techniques
- relevant support services and suppliers
- design personnel roles
- space planning, colour and lighting
- the impact of exhibition traffic flow patterns
- presentation standards
- OHS issues and safe handling requirements
- site storage arrangements.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- demonstrated ability to negotiate with an exhibitor and develop alternative designs for exhibition merchandising
- demonstrated ability to work in a team and install and bump out an exhibition display
- consistent application of relevant OHS requirements
- answers to questions on exhibition merchandising.

Context of and specific resources for assessment

Assessment must ensure access to:

- a real or simulated work environment
- relevant documentation, such as:
 - legislation and statutory requirements
 - OHS requirements
 - industry codes of practice
 - information and performance data on existing business model and IT infrastructure
- information on:
 - client requirements
 - organisation or product image
 - products and services
 - retail design trends
 - materials.

EVIDENCE GUIDE

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- a simulated exhibition design project
- third-party reports from a supervisor
- a folio of personally developed designs
- client feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Assessing employability skills

Employability skills are integral to effective performance in the workplace and are broadly consistent across industry sectors. How these skills are applied varies between occupations and qualifications due to the different work functions and contexts.

Employability skills embedded in this unit should be assessed holistically in the context of the job role and with other relevant units that make up the skill set or qualification.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

Clients may include:

- internal managers
- external organisations.

RANGE STATEMENT

Event checklist may include:

- exhibitor brief
- venue information
- venue regulations
- merchandise design.
- customer and exhibition profiles
- handling
- loading and transport logistics
- height, weight and other imposed restrictions
- audiovisual, electrics and other services.
- health and safety issues
- safety equipment
- site storage arrangements.

Safety and risk assessments may include:

- different venue safety regulations
- compliance with occupational health and safety regulations/legislation
- industry safety codes of practice
- traffic flow patterns
- size, type ,location, weight and stability of exhibit
- manual/mechanical handling requirements.

Specific operations for installation may include:

- construction
- packing
- transportation
- on-site installation services.

Unit Sector(s)

Sector Retail

Competency field

Competency field Merchandising

SIRRRPK010A Recommend home and home improvement products and services

Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit describes the performance outcomes, skills and knowledge required to provide advice to customers to assist their buying decisions regarding home and home improvement products and services.

Application of the Unit

Application of the unit This unit involves the application of knowledge of the store home and home improvement product range to provide advice to customers and other sales team staff with regard to features and benefits, product availability and price, and advice on services available. Frontline service personnel are responsible for these functions.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units Nil

Employability Skills Information

Employability skills The required outcomes described in this unit contain applicable facets of employability skills. The Employability Skills Summary of the qualification in which this unit is packaged will assist in identifying employability skills requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Research store product range.	<p>1.1 Develop <i>product knowledge</i> by accessing <i>relevant sources of information</i>.</p> <p>1.2 Identify <i>store product range</i> according to relevant product information.</p>
2 Recommend home and home improvement products.	<p>2.1 Identify relevant products to meet expressed <i>customer requirements</i> to assist their buying decisions.</p> <p>2.2 Demonstrate <i>features and benefits of products</i> to <i>customers</i> to create a buying environment.</p> <p>2.3 Convey technical features and benefits as outlined in manufacturer specifications.</p>
3 Advise on product warranties.	<p>3.1 Clearly explain comparisons between product and manufacturer warranty terms to customers.</p> <p>3.2 Confirm individual product warranty terms and by accessing relevant sources of information and</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>accurately conveying to customers.</p> <p>3.3 Provide customers with written information regarding individual product warranty terms and conditions, especially extended or promotional warranties, according to store policy and procedures.</p>
<p>4 Estimate quantities and order product.</p>	<p>4.1 <i>Estimate area and product quantities</i>, where required, based on manufacturer specifications, plan provided or customer needs.</p> <p>4.2 Arrange for area measurement where indicated by product type and according to store procedures.</p> <p>4.3 Calculate cost to customers and prepare quotes according to <i>store policy and procedures</i>.</p> <p>4.4 Order product and arrange customer pick-up and delivery or installation where required.</p> <p>4.5 Provide customers with accurate information regarding product availability, delivery and installation procedures as required, including date and time of delivery.</p> <p>4.6 Notify customers promptly of any undue delays regarding completion, supply or installation of products.</p>
<p>5 Negotiate price and payment options.</p>	<p>5.1 Convey store recommended retail pricing for various brand options accurately conveyed to customers according to legislative requirements.</p> <p>5.2 Negotiate individual product prices according to store policy where necessary to achieve sales.</p> <p>5.3 Convey store payment options to customers and negotiate preferred option following store procedures.</p>
<p>6 Advise on and arrange product service and repair.</p>	<p>6.1 Diagnose problem in terms of operator and equipment faults by observation, customer questioning and accessing manufacturer information.</p> <p>6.2 Offer solutions according to nature of problem, available product information and store policy.</p> <p>6.3 Identify and accurately describe service and repair process to customers, as required, according to store policy.</p>

ELEMENT

PERFORMANCE CRITERIA

- 6.4 Prepare and supply quotations and timelines to customers for basic service and repairs.
- 6.5 Identify and accurately transcribe customer details to repair form according to store procedures.
- 6.6 Label and securely store items for repair according to store policy.
- 6.7 Notify customers without undue delay on completion of service and repair.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

The following skills must be assessed as part of this unit:

- interpersonal communication skills to:
 - apply product knowledge by providing information and advice to customers and staff, including advice on warranties and product service and repair
 - make recommendations and advise on services through clear and direct communication
 - ask questions to identify and confirm requirements
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
- handling customers with special needs, including difficult or abusive customers
- demonstrating product features and operation
- negotiation skills
- using and applying technology required to demonstrate operation of store product range
- literacy skills in the following areas:
 - reading and understanding product information
 - reading and understanding product warranties and guarantees
- numeracy skills in regard to:
 - advising and negotiating price and payment options
 - measuring and estimating accurately
 - metric and imperial measuring scales
 - techniques and procedures for measuring surface areas
 - estimating from architects or builders plans.

The following knowledge must be assessed as part of this unit:

- store policy and procedures in regard to:
 - sales and customer service
 - methods of dealing with special needs and requests of customers
 - customer complaints
 - store pricing and payment and warranty terms and conditions
 - store product service and repair policy and procedures
- store home and home improvement product range
- design and technical information and features and function and operation of store product range

REQUIRED SKILLS AND KNOWLEDGE

- quality, energy efficiency and environmental considerations of products
- pricing procedures, including GST requirements
- relevant industry codes of practice.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- continually updates and applies product knowledge to provide comprehensive advice to customers and other sales team members
- understands and applies available product information when providing advice to customers
- consistently applies store policy and procedures and industry codes of practice in regard to sales and customer service procedures
- advises customers and informs other sales team members on store home and home improvement products in the store merchandise range. Advises customers and other sales team members on store merchandise range warranties and store pricing and payment options.

EVIDENCE GUIDE

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant sources of product information
- relevant documentation, such as:
 - store policy and procedures manuals
 - industry codes of practice and relevant legislation
 - OHS legislation and codes of practice
- an appropriate range of home and home improvement products
- a range of customers with different requirements.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- customer feedback
- answers to questions about specific skills and knowledge
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Assessing employability skills

Employability skills are integral to effective performance in the workplace and are broadly consistent across industry sectors. How these skills are applied varies between occupations and qualifications due to the different work functions and contexts.

Employability skills embedded in this unit should be assessed holistically in the context of the job role and with other relevant units that make up the skill set or qualification.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

- Product knowledge*** may include:
- function
 - brand and product options
 - warranties
 - quality
 - accessories
 - component parts
 - storage and operation
 - design features
 - style
 - available colour range
 - manufacturing process
 - price
 - partner or complementary products
 - country of manufacture
 - energy efficiency
 - safety features, including flammability
 - environmental considerations
 - materials and fibre types
 - construction of products
 - care and maintenance requirements
 - stain and dirt resistance
 - product performance
 - colour fastness, colour fading properties
 - availability.

RANGE STATEMENT

Relevant sources of information may include:

- supplier product leaflets
- store product manuals
- energy rating information
- warranty information
- internet
- trade shows
- customer feedback
- consulting store information
- designated staff members
- contacting suppliers direct.

Store product range may include:

- home and home improvement products
- furniture products
- floor covering products and services
- kitchen and bathroom renovation products
- hardware products
- home gardening products
- soft furnishings
- manchester
- haberdashery.

Customer requirements may include:

- usage requirements
- lifestyle
- price range.

RANGE STATEMENT

Features and benefits of products may include:

- product type
- product performance features
- product durability
- function
- warranties
- quality
- design aspects of colour and texture feel
- thickness and weight of furnishing fabrics
- acoustic and thermal insulation properties of materials
- manufacturing process
- price
- country of manufacture
- energy efficiency
- environmental considerations.

Customers may include:

- new and existing customers
- people from a range of social, cultural and ethnic backgrounds and with varying physical and mental abilities
- customers with routine or special needs.

Estimating area and product quantities may include:

- using measuring tools
- using a calculator
- estimating from builders' and architects' plans
- on-site measuring
- estimating based on measurements provided by customer
- making allowances for pattern matching
- estimating linear or volume-based quantities.

Store policy and procedures may include:

- policy and procedures relating to sales, payment and credit options, store reward schemes and customer service.

Unit Sector(s)

Sector Retail

Competency field

Competency field Product Knowledge

SIRXINV002A Maintain and order stock

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This unit describes the performance outcomes, skills and knowledge required to maintain and order stock in a retail environment. It involves monitoring receipt and dispatch of goods, maintaining stock records, coordinating stocktake, identifying stock losses, processing orders and following up on orders.

Application of the Unit

Application of the unit

This unit requires staff to exercise managerial responsibility to monitor and coordinate stock levels, storage, distribution and reorder cycles; roster staff, organise and coordinate stocktakes, maintain accurate records and routinely report on inventory status to relevant personnel according to store policy and procedures.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units

Nil

Employability Skills Information

Employability skills The required outcomes described in this unit contain applicable facets of employability skills. The Employability Skills Summary of the qualification in which this unit is packaged will assist in identifying employability skills requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Monitor receipt and dispatch of goods	<p>1.1 Delegate responsibility for receipt and dispatch of goods to <i>appropriate staff</i>.</p> <p>1.2 Implement store procedures in regard to receipt, dispatch and secure storage of goods.</p> <p>1.3 Observe <i>staff</i> functions to ensure store procedures are followed and documentation is completed correctly.</p> <p>1.4 Implement store procedures to ensure goods inspected for quantity and quality on receipt.</p> <p>1.5 Act upon variations to quantity and quality of delivered goods according to <i>store policy and procedures</i>.</p> <p>1.6 Supervise safe <i>handling and storage of goods</i> according to store policy.</p>

ELEMENT	PERFORMANCE CRITERIA
2 Maintain stock records.	2.1 Monitor and maintain stock levels at required levels. 2.2 Maintain, monitor and adjust stock reorder cycles as required. 2.3 Inform team members of their individual responsibilities in regard to recording of stock. 2.4 Maintain stock storage and movement <i>records</i> according to store policy. 2.5 Record stock discrepancies and follow procedures according to store policy. 2.6 Monitor stock performance and identify and <i>report</i> fast and slow selling items according to store policy.
3 Coordinate stocktake or cyclical count.	3.1 Interpret policy and procedures in regard to <i>stocktaking</i> and cyclical counts and explain to team members. 3.2 <i>Roster</i> staff according to allocated budget and time constraints. 3.3 Allocate stocktaking tasks to individual team members. 3.4 Provide team members with clear directions for the performance of each task. 3.5 Allocate team members to ensure effective use of staff resources to complete task. 3.6 Produce accurate reports on stocktake data, including discrepancies, for management.
4 Identify stock losses.	4.1 Identify, record and assess losses against potential loss forecast on a regular basis. 4.2 Identify avoidable losses and establish reasons. 4.3 Recommend and implement possible solutions.
5 Process orders.	5.1 Process and raise orders for stock as requested according to store policy and procedures. 5.2 Maintain <i>ordering and recording system</i> . 5.3 Ensure availability of sample range according to buying plan.

ELEMENT	PERFORMANCE CRITERIA
	5.4 Order pricing materials as required.
	5.5 Record negotiated purchase and supply agreements and file for retrieval.
6 Follow up orders.	6.1 Monitor delivery process to meet agreed deadlines.
	6.2 Handle routine supply problems or refer to management as required by store policy.
	6.3 Maintain ongoing liaison with buyers, store or departments, warehouse and <i>suppliers</i> to ensure continuity of supply.
	6.4 Distribute stock according to store or department allocation.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

The following skills must be assessed as part of this unit:

- store stocktaking systems
- use of electronic recording equipment
- interpersonal communication skills to:
 - inform team members of their responsibilities and give instructions
 - explain policies and procedures to staff
 - allocate tasks and provide directions for performance of tasks
 - liaise with buyers, store and departments, warehouse and suppliers through clear and direct communication
 - ask questions to identify and confirm requirements
 - use language and concepts appropriate to cultural differences
 - use and interpret non-verbal communication
- time management
- negotiation skills
- report preparation and presentation
- literacy and numeracy skills in regard to:
 - stock control reports and documentation
 - processing orders
 - maintaining delivery and supply records
 - stock distribution records
 - maintaining stock ordering and recording systems.

The following knowledge must be assessed as part of this unit:

- store policy and procedures in regard to:
 - stock control
 - store merchandising system
 - current and future stock levels
 - bar codes, labels and price tags
 - store stock recording system
 - stock replenishment and reorder procedures
 - inter- and intra-store and department transfers
 - reporting of stock discrepancies and damage
 - identifying and recording stock losses
 - identifying and recording discrepancies

REQUIRED SKILLS AND KNOWLEDGE

- existing suppliers
- quality control procedures and requirements
- receipt and dispatch of goods, including inspection for quality and quantity
- relevant licensing requirements for moving stock mechanically
- relevant legislation and statutory requirements
- relevant industry codes of practice
- relevant OHS legislation and codes of practice
- principles and techniques for interpersonal communication skills.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- consistently implements and monitors store policy and procedures regarding receipt, dispatch and secure storage of goods
- regularly monitors staff implementation of store procedures and documentation in regard to receipt, dispatch and secure storage of goods
- monitors stock levels, storage, movement and reorder cycles on a regular basis.
- organises and coordinates stocktake according to store policy and procedures
- consistently raises and processes stock orders and maintains record system according to store policy and procedures
- monitors delivery processes and distributes stock to ensure continuity of supply.

EVIDENCE GUIDE

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant documentation, such as:
 - store policy and procedures for receipt and dispatch of goods
 - store procedures for stocktake
 - OHS legislation and codes of practice
 - industry codes of practice
 - legislation and statutory requirements
 - store merchandising and marketing policy and procedures
 - inter- and intra-store and department transfer procedures
 - store quality control procedures and requirements.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of performance in the workplace
- third-party reports from a supervisor
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Assessing employability skills

Employability skills are integral to effective performance in the workplace and are broadly consistent across industry sectors. How these skills are applied varies between occupations and qualifications due to the different work functions and contexts.

Employability skills embedded in this unit should be assessed holistically in the context of the job role and with other relevant units that make up the skill set or qualification.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

- Appropriate staff*** may include:
- frontline staff
 - relevant managers
 - supervisor
 - team leader
 - specialist staff.

- Staff*** may include:
- full-time, part-time, casual or contract staff
 - people from a range of social, cultural and ethnic backgrounds
 - people with varying degrees of language and literacy levels.

- Store policy and procedures*** in regard to:
- stock control
 - stock control system
 - recording procedures
 - procedures for investigating discrepancies
 - store merchandise and marketing
 - pricing, labelling and packaging requirements
 - quality control policy and procedures.

- Handling and storage of goods*** may vary according to:
- stock characteristics
 - industry codes of practice.

- Records*** may be:
- manual
 - digital.

RANGE STATEMENT

Reports for management may include:

- financial reports
- business documents
- informal reports
- stocktake reports.

Stocktaking may be:

- cyclical
- compliance driven.

Roster may include:

- varying levels of staff training
- staffing levels
- routine or busy trading conditions
- full-time, part-time or casual staff
- range of staff responsibilities.

Ordering and recording system may be:

- manual
- digital.

Suppliers may include:

- existing contacts
- new contacts
- local suppliers
- overseas supplies.

Unit Sector(s)

Sector

Cross-Sector

Competency field

Competency field

Inventory

SIRXSL004A Build relationships with customers

Modification History

Not applicable.

Unit Descriptor

Unit descriptor

This unit describes the performance outcomes, skills and knowledge required to use advanced sales techniques in building relationships with customers and interacting with customers, applying expert product knowledge as it relates to customers, dealing with difficult customers, establishing and maintaining a customer database, and conducting sales presentations.

Application of the Unit

Application of the unit

This unit applies to senior sales personnel. It requires the development and maintenance of expert knowledge to provide accurate product information to customers, including post-sales support; and communication, analysis and sales techniques to plan and implement sales presentations, build positive relationships with customers, and resolve customer complaints.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units

Nil

Employability Skills Information

Employability skills The required outcomes described in this unit contain applicable facets of employability skills. The Employability Skills Summary of the qualification in which this unit is packaged will assist in identifying employability skills requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Establish rapport with customers.	<p>1.1 Establish rapport and relationship with <i>customer</i> and express a genuine interest in <i>customer needs and requirements</i> to enhance customer commitment, trust and credibility of store and to build return customer base.</p> <p>1.2 Maintain <i>professional ethics</i> with the customer to promote store image and credibility.</p> <p>1.3 Accurately clarify <i>customer needs and preferences</i> to maximise sales opportunities.</p> <p>1.4 Maximise sales opportunities by use of add-on and complementary <i>sales techniques</i>.</p> <p>1.5 Give customer space and time to evaluate purchase decision, while using time to maximum advantage for customer and store.</p>

ELEMENT	PERFORMANCE CRITERIA
2 Apply expert knowledge.	<p>1.6 Use effective methods to close sales.</p> <p>2.1 Provide customer with accurate information regarding product and service appraisals, correct statements and warranties according to legislative requirements.</p> <p>2.2 Provide detailed knowledge of supplier or manufacturer information according to customer needs and commercial confidentiality guidelines.</p> <p>2.3 Evaluate product range, accurately demonstrate features and benefits of products or services where appropriate and make recommendations to the customer to maximise sales potential.</p> <p>2.4 Maximise customer interest in product or service through price negotiation where applicable and offer payment and credit options according to store policy.</p> <p>2.5 Accurately calculate prices and discounts according to pricing determinants and store policy.</p>
3 Provide post sales support.	<p>3.1 Accurately provide evidence of ongoing support as sale is concluded.</p> <p>3.2 Accurately explain back-up service and reassure customer according to legislative requirements and store policy.</p> <p>3.3 Provide customer with store or salesperson's contact details to provide line of contact and customer followed up according to store policy.</p> <p>3.4 Accurately enter customer and transaction details into customer database.</p>
4 Plan sales presentations.	<p>4.1 Plan presentation to complement product characteristics.</p> <p>4.2 Select client group according to product characteristics and store merchandising policy.</p> <p>4.3 Access promotional materials where required and distribute to client group.</p> <p>4.4 Select and prepare a range of products or services for presentation to reflect store image, demographics and merchandising plan.</p>

ELEMENT	PERFORMANCE CRITERIA
5 Implement sales presentation.	<p>5.1 Ensure sufficient numbers of adequately briefed support staff, where required for a presentation.</p> <p>5.2 Apply communication skills to effectively create interest, focus attention, and encourage customer interaction with individuals or groups.</p> <p>5.3 Demonstrate products or services to create a buying environment.</p> <p>5.4 Measure results of sales presentation according to predetermined criteria, review overall performance and results, and apply information to enhance future <i>sales presentations</i> according to store sales policy.</p>
6 Maintain and utilise a customer database.	<p>6.1 Maintain customer confidentiality as required by store policy and legislative requirements.</p> <p>6.2 Develop and maintain accurate <i>customer records</i> and store securely according to store policy and procedures.</p> <p>6.3 Accurately identify and follow up regular customers according to store marketing policy.</p> <p>6.4 Accurately utilise customer records to advise customers on products and services of possible interest.</p> <p>6.5 Implement <i>customer loyalty schemes</i> where required according to store promotional activities.</p>
7 Deal with difficult customers.	<p>7.1 Acknowledge customer complaints and problems and reassuringly support <i>difficult customers</i> to produce positive outcome.</p> <p>7.2 Use questioning and active listening to encourage customer to verbalise issue and minimise customer frustration.</p> <p>7.3 Develop customer's confidence in the candidate and product or service to promote long-term trust and commitment to store.</p> <p>7.4 Establish mutually acceptable resolution of complaint.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

The following skills must be assessed as part of this unit:

- selling techniques, including:
 - opening and closing techniques
 - identifying buying signals
 - strategies to focus customer on specific merchandise
 - add-ons and complementary sales
 - overcoming customer objections
- presentation skills
- conflict resolution
- verbal and non-verbal interpersonal communication
- accessing relevant product information
- literacy and numeracy skills in regard to:
 - reading and understanding product information
 - reading and understanding store policies and procedures
 - recording client and sales information
 - calculating prices and discounts.

The following knowledge must be assessed as part of this unit:

- store policies and procedures, in regard to:
 - establishing, maintaining and utilising customer records
 - updating and maintaining customer mailing lists
 - methods of maintaining customer confidentiality and secure storage of customer details
 - pricing, including GST requirements
 - price negotiation and payment and credit options
 - resolving customer complaints
- store and area merchandise and service range
- relevant legislation and statutory requirements
- relevant industry codes of practice
- OHS requirements such as:
 - manual handling
 - plant and equipment

REQUIRED SKILLS AND KNOWLEDGE

- hazardous substances and dangerous goods
- workers compensation
- customer types and needs, including:
 - customer buying motives, customer behaviour and cues
 - individual and cultural differences, demographics, lifestyle and income
 - types of customer needs, e.g. functional, psychological.

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- consistently applies store policies and procedures in regard to selling products and services, dealing with customers, planning and implementing sales presentations and providing after sales support
- consistently applies industry codes of practice, relevant legislation and statutory requirements in regard to selling products and services
- consistently develops customer commitment to store and builds return customer base by establishing rapport and relationship with customer, maintaining professional ethics, and accurately discerning customer buying motives and customer needs and requirements
- consistently maximises sales opportunities by using effective selling techniques, applying detailed product knowledge and using an appropriate sales approach to sell the benefits of products, overcome objections and close sales
- consistently and accurately applies detailed knowledge of manufacturer and supplier supply, back-up service and warranty information to enhance customer support
- consistently uses effective questioning, listening and observation skills to accurately determine customer requirements
- consistently and effectively plans, prepares and conducts sales presentations and briefs support staff where required, to create a buying environment and maximise sales performance
- consistently evaluates personal and or team sales performance to maximise future sales
- consistently and accurately establishes, records and maintains customer records and details, maintains customer confidentiality, ensures secure storage of data and uses customer records to maximise customer interest and create a buying atmosphere
- consistently resolves customer complaints by acknowledging problems and supporting customer to produce positive outcomes and obtain mutually acceptable complaint resolution.

EVIDENCE GUIDE

Context of and specific resources for assessment

Assessment must ensure access to:

- a retail work environment
- relevant sources of product information
- relevant documentation, such as:
 - policy and procedures manuals
 - industry codes of practice and relevant legislation
 - OHS legislation and codes of practice
- a range of customers with different requirements
- an appropriate range of products and equipment
- a customer database system.

Methods of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of the candidate in the workplace
- third-party reports from a supervisor
- customer feedback
- written or verbal questioning to assess knowledge and understanding
- review of portfolios of evidence and third-party workplace reports of on-the-job performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

Assessing employability skills

Employability skills are integral to effective performance in the workplace and are broadly consistent across industry sectors. How these skills are applied varies between occupations and qualifications due to the different work functions and contexts.

Employability skills embedded in this unit should be assessed holistically in the context of the job role and with other relevant units that make up the skill set or qualification.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the performance criteria is detailed below.

Customers may include:

- new or repeat contacts
- external and internal contacts
- customers with routine or special requests
- people from a range of social, cultural and ethnic backgrounds and with varying physical and mental abilities
- a single customer, couples, families or groups.

Customer needs and requirements may be clarified through:

- observation
- appropriate questioning
- active listening
- empathy
- reassurance and confirmation.

Maintaining ***professional ethics*** with the customer may include:

- honesty
- positive statements
- confirmed appraisals of products and services.

Customer needs and preferences may include:

- product type
- brand
- size
- product characteristics
- customer physical needs
- price.

RANGE STATEMENT

Sales techniques will include:

- add-on and complementary products and services
- selling up or down
- suggestive selling
- variety of methods of closing sales.

Legislative requirements may include:

- Trade Practices and Fair Trading Acts
- environmental protection legislation
- OHS
- transport, storage and handling of goods
- pricing procedures, including GST requirements
- privacy laws
- liquor laws
- tobacco laws
- sale of second-hand goods
- health and welfare law specific to local government, state and federal legislation.

Store policy and procedures in regard to:

- selling products and services
- maintaining and utilising client records
- promotional, marketing, discounting and reward programs
- dealing with difficult customers
- resolving customer complaints.

Back-up service may include:

- delivery specifications
- warranties and guarantees
- returns policies
- technical support
- installation
- financial products and services.

Customer database may be:

- manual
- computer-based.

RANGE STATEMENT

Product characteristics may include:

- features and benefits
- price range
- supplier or manufacturer information
- target group.

Promotional materials may include:

- brochures
- pamphlets
- posters
- promotional merchandise
- business cards
- vouchers.

Sales presentations may be:

- in-house
- at client site
- visual
- verbal.

Customer records may include:

- name and contact details
- transaction records
- personal preferences
- anniversaries and special dates
- details of items bought or returned.

Customer loyalty schemes may include:

- customer clubs
- customer reward schemes
- credit or discount facilities
- special offers.

TDTD297B Shift a load using manually-operated equipment

Modification History

Not applicable.

Unit Descriptor

Field D Load handling

This unit involves the skills and knowledge required to shift loads using manually-operated mechanical equipment, including assessing the risks associated with relocating the load, planning the relocation process and carrying out the relocation with the aid of the equipment in accordance with the plan.

Persons achieving competence in this unit will need to fulfil all of the relevant State/Territory OHS regulatory requirements concerning the safe lifting and handling of a load using manually-operated load-shifting equipment. It should be noted that the use of the term 'SWL' (Safe Working Load) is under review by Standards Australia and may be replaced in the future by the term 'Rated Capacity'.

Field D Load handling

This unit involves the skills and knowledge required to shift loads using manually-operated mechanical equipment, including assessing the risks associated with relocating the load, planning the relocation process and carrying out the relocation with the aid of the equipment in accordance with the plan.

Persons achieving competence in this unit will need to fulfil all of the relevant State/Territory OHS regulatory requirements concerning the safe lifting and handling of a load using manually-operated load-shifting equipment. It should be noted that the use of the term 'SWL' (Safe Working Load) is under review by Standards Australia and may be replaced in the future by the term 'Rated Capacity'.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Assess risks arising from the relocation of the load	1.1 Products, goods or materials to be relocated are identified
	1.2 Location for storage is determined
	1.3 Routes to be followed are identified
	1.4 Points of balance are estimated
	1.5 Effect of moving contents which may be loose, liquid, dangerous or hazardous are considered
	1.6 Potential risks in route(s) which may be followed are considered
	1.7 Lifting equipment to minimise potential risks is identified
	1.8 Appropriate personal protective equipment is worn
2 Plan load relocation	2.1 Load shifting equipment is selected in accordance with workplace procedures
	2.2 Safe procedures for using lifting equipment are identified, including the calculation of Safe Working Load (SWL) and/or Working Load Limit (WLL) for weight of goods to be moved
	2.3 Process for relocating load is proposed including predicting and planning for potential difficulties
	2.4 Proposed process is checked against relevant code of practice and workplace procedures for compliance

- 2.5 Lifting equipment and accessories are checked for safe operation in accordance with manufacturer's instructions and workplace procedures
- 3 Relocate load
 - 3.1 Any unsafe equipment is reported to appropriate personnel in accordance with workplace procedures
 - 3.2 Planned process and route are followed using equipment within necessary range of limitations
 - 3.3 Relocated materials are set down without damage to goods, personnel or equipment and checked for stability
 - 3.4 Relocation is checked to see that it meets work requirements, and any variances are reported
 - 3.5 Equipment is returned to storage area in accordance with workplace procedures

Required Skills and Knowledge

Not applicable.

Evidence Guide

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. use manually-operated equipment to shift loads
 - a.2. identify risks to self, others and equipment when using manually-operated equipment to shift loads and take appropriate precautions to minimise the risks
 - a.3. estimate effect of load and operating limitations of equipment
 - a.4. locate, interpret and apply relevant information
 - a.5. maintain workplace records
 - a.6. use workplace colloquial and technical language and communication technologies in the workplace context

Interdependent assessment of units

- a. This unit of competency may be assessed in conjunction with other units that form part of a worker's job function

Required knowledge and skills

- a. Relevant OHS and procedures and guidelines concerning the use of manually-operated equipment to shift loads
- b. Risks when using manually-operated equipment to shift loads and related precautions to control the risk
- c. Workplace procedures and policies for the shifting of goods and materials using manually-operated equipment
- d. Housekeeping standards procedures required in the workplace
- e. Site layout and obstacles
- f. Ability to modify activities depending on differing workplace contexts, risk situations and environments
- g. Ability to read and comprehend simple statements in English
- h. Ability to identify containers and goods coding, IMDG markings and where applicable emergency information panels
- i. Ability to estimate the size shape and special requirements of loads

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to shift materials safely using manually-operated equipment, and/or
 - a.2. shift materials safely using manually-operated equipment in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. using manually-operated equipment to shift loads
 - a.2. identifying risks to self, others and equipment when using manually-operated equipment to shift loads and taking appropriate precautions to minimise the risks
 - a.3. estimating effect of load and operating limitations of equipment
 - a.4. locating, interpreting and applying relevant information
 - a.5. maintaining workplace records
 - a.6. using workplace colloquial and technical language and communication technologies in the workplace context
- b. Shows evidence of application of relevant workplace procedures including:

- b.1. OHS regulations and hazard prevention policies and procedures
- b.2. workplace procedures and work instructions concerning the use of manually-operated equipment to shift loads
- b.3. obtaining assistance from other team members when required
- b.4. housekeeping procedures
- b.5. environmental protection procedures when shifting materials
- c. Action is taken promptly to report and/or rectify any potential difficulties in safely shifting a load using manually-operated equipment in accordance with OHS requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Work is completed systematically with required attention to detail without damage to goods, equipment or personnel

Context for assessment

- a. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - a.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - a.2. Appropriate practical assessment must occur:
 - a.2.1. at the Registered Training Organisation, and/or
 - a.2.2. in an appropriate work situation

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. use manually-operated equipment to shift loads
 - a.2. identify risks to self, others and equipment when using manually-operated equipment to shift loads and take appropriate precautions to minimise the risks
 - a.3. estimate effect of load and operating limitations of equipment
 - a.4. locate, interpret and apply relevant information
 - a.5. maintain workplace records
 - a.6. use workplace colloquial and technical language and communication technologies in the workplace context

Interdependent assessment of units

- a. This unit of competency may be assessed in conjunction with other units that form part of a worker's job function

Required knowledge and skills

- a. Relevant OHS and procedures and guidelines concerning the use of manually-operated equipment to shift loads
- b. Risks when using manually-operated equipment to shift loads and related precautions to control the risk
- c. Workplace procedures and policies for the shifting of goods and materials using manually-operated equipment
- d. Housekeeping standards procedures required in the workplace
- e. Site layout and obstacles
- f. Ability to modify activities depending on differing workplace contexts, risk situations and environments
- g. Ability to read and comprehend simple statements in English
- h. Ability to identify containers and goods coding, IMDG markings and where applicable emergency information panels
- i. Ability to estimate the size shape and special requirements of loads

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to shift materials safely using manually-operated equipment, and/or
 - a.2. shift materials safely using manually-operated equipment in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. using manually-operated equipment to shift loads
 - a.2. identifying risks to self, others and equipment when using manually-operated equipment to shift loads and taking appropriate precautions to minimise the risks
 - a.3. estimating effect of load and operating limitations of equipment
 - a.4. locating, interpreting and applying relevant information
 - a.5. maintaining workplace records
 - a.6. using workplace colloquial and technical language and communication technologies in the workplace context
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. OHS regulations and hazard prevention policies and procedures
 - b.2. workplace procedures and work instructions concerning the use of manually-operated equipment to shift loads
 - b.3. obtaining assistance from other team members when required
 - b.4. housekeeping procedures
 - b.5. environmental protection procedures when shifting materials
- c. Action is taken promptly to report and/or rectify any potential difficulties in safely shifting a load using manually-operated equipment in accordance with OHS requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Work is completed systematically with required attention to detail without damage to goods, equipment or personnel

Context for assessment

- a. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - a.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - a.2. Appropriate practical assessment must occur:
 - a.2.1. at the Registered Training Organisation, and/or
 - a.2.2. in an appropriate work situation

Range Statement

General context

- a. Work must be carried out in compliance with the relevant OHS regulations concerning the shifting and movement of loads using manually-operated equipment
- b. Work is performed under some supervision generally within a team environment
- c. Work involves the application of the basic principles for the safe shifting of loads using manually-operated equipment

Worksite environment

- a. The shifting operations may be conducted in a range of work environments by day or night
- b. Customers may be internal or external
- c. Workplaces may comprise large, medium or small worksites
- d. Work may be conducted in:
 - d.1. restricted spaces
 - d.2. exposed conditions
 - d.3. controlled or open environments
- e. Materials to be shifted may include:
 - e.1. goods
 - e.2. equipment and tools
 - e.3. cleaning materials
 - e.4. components and parts of vehicles and equipment such as tyres, batteries, lifting gear, etc.
 - e.5. materials used in the course of work such as drums of fuel, raw materials, packaging, etc.
- f. Loads to be shifted may be:
 - f.1. irregularly shaped
 - f.2. packaged or unpackaged
 - f.3. labelled or unlabelled
 - f.4. palletted or unpalletted
- g. Hazards in the work area may include exposure to:
 - g.1. chemicals
 - g.2. dangerous or hazardous substances
 - g.3. movements of equipment, goods and materials
- h. Personnel in the work area may include:
 - h.1. workplace personnel
 - h.2. site visitors
 - h.3. contractors
 - h.4. official representatives
- i. Communication in the work area may include:
 - i.1. phone
 - i.2. electronic data interchange
 - i.3. fax
 - i.4. e-mail
 - i.5. Internet
 - i.6. radio
 - i.7. oral, aural or signed communications
- j. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - j.1. company procedures
 - j.2. enterprise procedures

- j.3. organisational procedures
- j.4. established procedures
- k. Personal protection equipment may include:
 - k.1. gloves
 - k.2. safety headwear and footwear
 - k.3. safety glasses
 - k.4. two-way radios
 - k.5. high visibility clothing

Sources of information/documents

- a. Information/documents may include:
 - a.1. goods identification numbers and codes
 - a.2. manifests, bar codes, goods and container identification
 - a.3. manufacturer's instructions concerning the use and servicing of manually-operated load shifting equipment
 - a.4. workplace procedures and policies
 - a.5. supplier and/or client instructions
 - a.6. material safety data sheets
 - a.7. codes of practice including the National Standards for Manual Handling and the Industry Safety Code
 - a.8. relevant legislation, regulations and related documentation
 - a.9. award, enterprise bargaining agreement, other industrial arrangements
 - a.10. standards and certification requirements
 - a.11. quality assurance procedures
 - a.12. emergency procedures

Applicable regulations and legislation

- a. Applicable regulations and legislation may include:
 - a.1. relevant State/Territory OHS legislation
 - a.2. relevant State/Territory environmental protection legislation
 - a.3. workplace relations regulations
 - a.4. workers compensation regulations
 - a.5. licence, patent or copyright arrangements
 - a.6. dangerous goods and air freight regulations
 - a.7. export/import/quarantine/bond requirements
 - a.8. marine orders

General context

- a. Work must be carried out in compliance with the relevant OHS regulations concerning the shifting and movement of loads using manually-operated equipment
- b. Work is performed under some supervision generally within a team environment
- c. Work involves the application of the basic principles for the safe shifting of loads using manually-operated equipment

Worksite environment

- a. The shifting operations may be conducted in a range of work environments by day or night
- b. Customers may be internal or external
- c. Workplaces may comprise large, medium or small worksites
- d. Work may be conducted in:
 - d.1. restricted spaces
 - d.2. exposed conditions
 - d.3. controlled or open environments

e. Materials to be shifted may include:

- e.1. goods
- e.2. equipment and tools
- e.3. cleaning materials
- e.4. components and parts of vehicles and equipment such as tyres, batteries, lifting gear, etc.
- e.5. materials used in the course of work such as drums of fuel, raw materials, packaging, etc.

f. Loads to be shifted may be:

- f.1. irregularly shaped
- f.2. packaged or unpackaged
- f.3. labelled or unlabelled
- f.4. palletted or unpalletted

g. Hazards in the work area may include exposure to:

- g.1. chemicals
- g.2. dangerous or hazardous substances
- g.3. movements of equipment, goods and materials

h. Personnel in the work area may include:

- h.1. workplace personnel
- h.2. site visitors
- h.3. contractors
- h.4. official representatives

i. Communication in the work area may include:

- i.1. phone
- i.2. electronic data interchange
- i.3. fax
- i.4. e-mail
- i.5. Internet
- i.6. radio
- i.7. oral, aural or signed communications

j. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

- j.1. company procedures
- j.2. enterprise procedures
- j.3. organisational procedures
- j.4. established procedures

k. Personal protection equipment may include:

- k.1. gloves
- k.2. safety headwear and footwear
- k.3. safety glasses
- k.4. two-way radios
- k.5. high visibility clothing

Sources of information/documents

a. Information/documents may include:

- a.1. goods identification numbers and codes
- a.2. manifests, bar codes, goods and container identification
- a.3. manufacturer's instructions concerning the use and servicing of manually-operated load shifting equipment
- a.4. workplace procedures and policies
- a.5. supplier and/or client instructions

- a.6. material safety data sheets
- a.7. codes of practice including the National Standards for Manual Handling and the Industry Safety Code
- a.8. relevant legislation, regulations and related documentation
- a.9. award, enterprise bargaining agreement, other industrial arrangements
- a.10. standards and certification requirements
- a.11. quality assurance procedures
- a.12. emergency procedures

Applicable regulations and legislation

- a. Applicable regulations and legislation may include:
 - a.1. relevant State/Territory OHS legislation
 - a.2. relevant State/Territory environmental protection legislation
 - a.3. workplace relations regulations
 - a.4. workers compensation regulations
 - a.5. licence, patent or copyright arrangements
 - a.6. dangerous goods and air freight regulations
 - a.7. export/import/quarantine/bond requirements
 - a.8. marine orders

Unit Sector(s)

Not applicable.

TLIA1107C Package goods

Modification History

Not applicable.

Unit Descriptor

This unit involves the skills and knowledge required to package goods in accordance with regulatory and workplace requirements including selecting materials, packing and unwrapping products, and labelling packaged products/loads to the required labelling standards.

Application of the Unit

Work must be carried out in compliance with the relevant regulations and workplace requirements concerning the packaging of goods.

Work is performed under some supervision generally within a team environment. It involves the application of workplace procedures and regulatory requirements to the packaging of goods as part of work activities in the warehousing, distribution and/or storage industries.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this competency is packaged will assist in identifying employability skill requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Select materials and pack and unwrap products	1.1 Packaging specifications and order packaging documentation are correctly interpreted
	1.2 Appropriate packaging technology suitable for the goods to be packed is selected
	1.3 Packaging materials are identified and matched to specifications
	1.4 Work plan ensures materials are used economically and that appropriate packaging is used that minimises loss and damage in transit or storage
	1.5 Work is planned in accordance with OH&S requirements
	1.6 Completed packed goods are stacked to minimise damage from within and outside
2 Label packaged products/loads	2.1 Workplace labelling standards are identified
	2.2 Appropriate goods handling, labelling and other identification symbols are utilised
	2.3 Invoices and picking slips are attached (where required)
	2.4 Workplace documentation is completed

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

Australian and international codes and regulations relevant to the packaging of goods including the Australian Dangerous Goods Code (ADG Code)

Relevant OH&S and environmental protection procedures and guidelines

Workplace procedures and policies for the packaging of goods

Focus of operation of work systems, equipment, management and site operating systems for the packaging of goods

Problems that may occur when packaging goods and appropriate action that can be taken to resolve the problems

Documentation requirements for the packaging of goods

Housekeeping standards procedures required in the workplace

Site layout and obstacles

Required skills:

Communicate effectively with others when packaging goods

Read and interpret instructions, procedures and labels relevant to the packaging of goods

Complete documentation related to work activities when packaging goods

Work collaboratively with others when packaging goods

Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others

Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when packaging goods in accordance with regulatory requirements and workplace procedures

Implement contingency plans for unplanned events that may occur when packaging goods

Apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities

Monitor work activities in terms of planned schedule

Modify activities depending on differing operational contingencies, risk situations and environments

Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment

Operate and adapt to differences in equipment in accordance with standard operating procedures

Select and use required personal protective equipment conforming to industry and OH&S standards

Monitor performance of equipment when packaging goods

Check operation of packaging equipment in terms of service schedule and standard operating procedures

Select and use relevant communications, computing equipment and materials when packaging goods

Estimate the size, shape and special requirements of goods and loads

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:

- the underpinning knowledge and skills
- relevant legislation and workplace procedures
- other relevant aspects of the range statement

Context of and specific resources for assessment

Performance is demonstrated consistently over a period of time and in a suitable range of contexts

Resources for assessment include:

- a range of relevant exercises, case studies and other simulated practical and knowledge assessment, and/or

- access to an appropriate range of relevant operational situations in the workplace

In both real and simulated environments, access is required to:

- relevant and appropriate materials and/or equipment, and/or

- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

Assessment of this unit must be undertaken by a registered training organisation

As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests

Practical assessment must occur:

- through appropriately simulated activities at the registered training organisation, and/or

- in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Work may be conducted:	in a range of work environments by day or night
Customers may be:	internal or external
Workplaces may comprise:	large, medium or small worksites
Work may be conducted in:	restricted spaces exposed conditions controlled or open environments
Goods may involve:	special handling, storage and/or packaging requirements, including temperature controlled goods and dangerous goods
Hazards in the work area may include exposure to:	chemicals dangerous or hazardous substances movements of equipment, goods and materials oil or water on floor a fire or explosion damaged packaging or pallets debris on floor faulty racking poorly stacked pallets faulty equipment
Consultative processes may involve:	other employees and supervisors suppliers, customers and clients relevant authorities and institutions management and union representatives industrial relations and OH&S specialists other maintenance, professional or technical staff

Communication in the work area may include:

phone
electronic data interchange (EDI)
fax
email
internet
radio
oral, aural or signed communications

Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:

company procedures
enterprise procedures
organisational procedures
established procedures

Personal protective equipment may include:

gloves
safety headwear and footwear
safety glasses
two-way radios
high visibility clothing

Information/documents may include:

goods identification numbers and codes
manifests, picking slips, merchandise transfers, stock requisitions and bar codes
codes of practice and regulations relevant to the packaging of goods
Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances
operations manuals, job specifications and induction documentation
manufacturers specifications for equipment
workplace procedures and policies
supplier and/or client instructions
dangerous goods declarations and material safety data sheets (where applicable)
award, enterprise bargaining agreement, other industrial arrangements
relevant Australian standards and

certification requirements
quality assurance procedures
emergency procedures

Applicable regulations and legislation may include:

relevant codes and regulations for the packaging of goods

Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:

Australian and International Dangerous Goods Codes

Australian and International Explosives Codes

licence, patent or copyright arrangements
water and road use and licence arrangements
export/import/quarantine/bond requirements
marine orders

relevant state/territory OH&S and environmental protection legislation
workplace relations regulations
workers compensation regulations

Unit Sector(s)

Not applicable.

Competency Field

A - Handling Cargo/Stock

TLIA1307C Receive goods

Modification History

Not applicable.

Unit Descriptor

This unit involves the skills and knowledge required to receive goods in accordance with regulatory and workplace requirements, including identifying workplace procedures and documentation requirements for the receipt of goods; checking and inspecting goods on arrival and completing workplace documentation; and unloading, packing and storing stock.

Application of the Unit

Work must be carried out in compliance with the relevant regulations and workplace requirements concerning the receiving of goods.

Work is performed under some supervision generally within a team environment. It involves the application of workplace procedures and regulatory requirements to the receiving of goods as part of work activities in the warehousing, distribution and/or storage industries.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this competency is packaged will assist in identifying employability skill requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Identify workplace procedures and documentation requirements for the receipt of goods	1.1 Workplace procedures for receipt of goods are identified
	1.2 Purpose of documents associated with the receipt of goods is interpreted
	1.3 Workplace documentation requirements for the receipt of goods and reporting of damage are identified
2 Check and inspect goods on arrival and complete workplace documentation	2.1 Procedures for checking of goods in comparison with orders or manifests are identified and followed
	2.2 Discrepancies and/or damaged goods are reported
	2.3 Non-conforming goods are appropriately documented and despatched or stored in accordance with company procedures
3 Unload, unpack and store stock	3.1 Appropriate manual handling techniques and equipment are identified
	3.2 Safe work procedures are used when unloading, unpacking and storing stock
	3.3 Advice on appropriate storage locations and requirements for particular products is sought
	3.4 Goods are unloaded and unpacked in accordance with workplace procedures
	3.5 Assistance from others is sought when required to maintain safe and effective work
	3.6 Directions are followed to store stock in appropriate areas

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

Australian and international codes and regulations relevant to the receiving of goods including the ADG Code and relevant bond, quarantine or other legislative requirements

Relevant OH&S and environmental protection procedures and guidelines

Workplace procedures and policies for the receiving of goods

Focus of operation of work systems, equipment, management and site operating systems for the receiving of goods

Problems that may occur when receiving goods and appropriate action that can be taken to resolve the problems

Specifications and standards for the checking and inspection of received goods

Documentation requirements for the receiving of goods

Housekeeping standards procedures required in the workplace

Site layout and obstacles

Required skills:

Communicate effectively with others when receiving goods

Read and comprehend simple statements in English

Read and interpret instructions, procedures, information, labels and signs relevant to receiving goods

Complete documentation related to the receipt of goods

Identify containers and goods coding, ADG and IMDG markings and where applicable emergency information panels

Work collaboratively with others when receiving goods

Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others

Promptly report and/or rectify any identified problems when receiving goods in accordance

with regulatory requirements and workplace procedures

Implement contingency plans for unplanned events when receiving goods

Apply precautions and required action to minimise, control or eliminate hazards that may exist when receiving goods

Monitor work activities in terms of planned schedule

Modify activities depending on differing operational contingencies, risk situations and environments

Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment

Operate and adapt to differences in equipment in accordance with standard operating procedures

Select and use relevant load handling equipment when receiving goods

Select and use required personal protective equipment conforming to industry and OH&S standards

Estimate the size, shape and special requirements of goods and loads

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:

- the underpinning knowledge and skills
- relevant legislation and workplace procedures
- other relevant aspects of the range statement

Context of and specific resources for assessment

Performance is demonstrated consistently over a period of time and in a suitable range of contexts

Resources for assessment include:

- a range of relevant exercises, case studies and other simulated practical and knowledge assessment, and/or

- access to an appropriate range of relevant operational situations in the workplace

In both real and simulated environments, access is required to:

- relevant and appropriate materials and/or equipment, and/or

- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

Assessment of this unit must be undertaken by a registered training organisation

As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests

Practical assessment must occur:

- through appropriately simulated activities at the registered training organisation, and/or

- in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Work may be conducted:	in a range of work environments by day or night
Customers may be:	internal or external
Workplaces may comprise:	large, medium or small worksites
Work may be conducted in:	limited or restricted spaces exposed conditions controlled or open environments
Received goods may involve:	special handling and storage requirements, including temperature controlled goods and dangerous goods
Problems that may occur when receiving goods may include:	damaged stock damaged pallets or packaging wrong stock error in paperwork poorly stacked stock incorrect quantity
Aspects of goods to be checked when receiving goods may include:	correct type number condition quality packaging labelling dangerous goods declarations and markings (where applicable)
Hazards in the work area may include exposure to:	chemicals dangerous or hazardous substances movements of equipment, goods and materials

	oil or water on floor
	fire or explosion
	damaged packaging or pallets
	debris on floor
	poorly stacked pallets
	faulty equipment
Consultative processes may involve:	other employees and supervisors
	suppliers, customers and clients
	drivers and agents
	relevant authorities and institutions
	management and union representatives
	industrial relations and OH&S specialists
	other maintenance, professional or technical staff
Communication in the work area may include:	phone
	electronic data interchange (EDI)
	fax
	email
	internet
	RF systems
	oral, aural or signed communications
Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:	company procedures
	enterprise procedures
	organisational procedures
	established procedures
Personal protective equipment may include:	gloves
	safety headwear and footwear
	safety glasses
	two-way radios
	high visibility clothing
Information/documents may include:	goods identification numbers and codes
	manifests, picking slips, merchandise transfers, stock requisitions and bar codes

codes of practice and regulations relevant to the receiving of goods

Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances

operations manuals, job specifications and induction documentation

manufacturers specifications for equipment

workplace procedures and policies

supplier and/or client instructions

dangerous goods declarations and material safety data sheets (where applicable)

award, enterprise bargaining agreement, other industrial arrangements

relevant Australian standards and certification requirements

quality assurance procedures

emergency procedures

Applicable regulations and legislation may include:

relevant codes and regulations for the receiving of goods

Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:

Australian and International Dangerous Goods Codes

Australian Marine Orders and the International Maritime Dangerous Goods Code

IATA Dangerous Goods by Air Regulations

Australian and international explosives codes

licence, patent or copyright arrangements

water and road use and licence arrangements

export/import/quarantine/bond requirements

marine orders

relevant state/territory OH&S and

environmental protection legislation
workplace relations regulations
workers compensation regulations

Unit Sector(s)

Not applicable.

Competency Field

A - Handling Cargo/Stock

TLIA1607C Use inventory systems to organise stock control

Modification History

Not applicable.

Unit Descriptor

This unit involves the skills and knowledge required to use inventory systems to organise stock control in accordance with workplace requirements including identifying inventory and stock control systems in use in the workplace, using re-order procedures to maintain stock levels, organising cyclical stock counts, and reporting discrepancies or variances.

Application of the Unit

Work must be carried out in compliance with the relevant regulations and workplace requirements concerning the use of inventory systems to organise stock control. Work is performed under some supervision generally within a team environment. It involves the application of product knowledge and an understanding of relevant workplace procedures and regulatory requirements when using inventory systems to organise stock control as part of work activities in the warehousing, distribution and/or storage industries.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this competency is packaged will assist in identifying employability skill requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency. Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Identify inventory and stock control systems in use in the workplace	1.1 Workplace inventory and stock control equipment, software and systems are identified
	1.2 Reasons for common database approach to inventory records and documentation in the warehouse are explained
	1.3 Procedures for identification and reporting of discrepancies or variances are identified
2 Use re-order procedures to maintain stock levels	2.1 Stock level maintenance checking is conducted
	2.2 Stock is re-ordered to meet stock level maintenance requirements in accordance with workplace policies and procedures
	2.3 Data is accurately entered and extracted from the inventory/records system using appropriate workplace procedures
3 Organise cyclical stock counts and report discrepancies or variances	3.1 Process for cyclical stock count is planned and work allocated to team members
	3.2 Clear directions on tasks to be performed are given
	3.3 Stocktake activities are conducted in accordance with workplace procedures
	3.4 Types and causes of records discrepancies are identified
	3.5 Procedures for noting and correcting minor discrepancies are used
	3.6 Major discrepancies are reported in accordance with workplace procedures
	3.7 Workplace documentation is completed
4 Produce reports on record keeping and inventory functions	4.1 Types of reports to be produced from inventory records systems are identified
	4.2 Reports are produced in accordance with workplace procedures and relevant regulatory

requirements

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

Australian codes and regulations relevant to the organisation of stock control

Relevant OH&S and environmental protection procedures and guidelines

Workplace procedures and policies for the use of inventory systems to organise stock control

Focus of operation of inventory systems, equipment, management and site operating systems for the control of stock

Principles of operation and functions of inventory systems

Applications of different types of inventory systems and stock management approaches

Workplace processes for records management and the production of inventory reports

Principles of operation and functions of inventory systems

Computer records and documentation requirements for stock control, including forms, checklists and inventory reports

Housekeeping standards procedures required in the workplace

Site layout and obstacles

Required skills:

Communicate effectively with others when using inventory systems to organise stock control

Read and comprehend simple statements in English

Read and interpret instructions, procedures and labels relevant to the use of inventory systems for the organisation of stock control

Complete documentation related to the use of inventory systems to organise stock control

Work collaboratively with others when using inventory systems to organise stock control

Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others

Promptly report and/or rectify any identified problems when using inventory systems to organise stock control in accordance with regulatory requirements and workplace procedures

Implement contingency plans for unplanned events

Modify activities depending on differing operational contingencies, risk situations and environments

Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment

Operate and adapt to differences in equipment in accordance with standard operating procedures

Select and use required personal protective equipment conforming to industry and OH&S standards

Select and use relevant communications, computing and office equipment when using inventory systems to organise stock control

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:

- the underpinning knowledge and skills
- relevant legislation and workplace procedures
- other relevant aspects of the range statement

Context of and specific resources for assessment

Performance is demonstrated consistently over a period of time and in a suitable range of contexts

Resources for assessment include:

- a range of relevant exercises, case studies and other simulated practical and knowledge assessment, and/or

- access to an appropriate range of relevant operational situations in the workplace

In both real and simulated environments, access is required to:

- relevant and appropriate materials and/or equipment, and/or

- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

Assessment of this unit must be undertaken by a registered training organisation

As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests

Practical assessment must occur:

- through appropriately simulated activities at the registered training organisation, and/or

- in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Work may be conducted:	in a range of work environments by day or night
Customers may be:	internal or external
Workplaces may comprise:	large, medium or small worksites
Work may be conducted in:	limited or restricted spaces exposed conditions controlled or open environments
Goods may involve:	special handling, location, storage and/or packaging requirements, including temperature controlled goods and dangerous goods
Inventory systems may be:	automated manual paper-based computerised microfiche
Categories or groups of products/stock may include:	small parts perishable goods overseas export dangerous goods refrigerated products temperature controlled stock fragile goods
The characteristics of products/stock may include:	small parts toxicity flammability form weight

	size
	state
	perishability
	fragility
	security risk
Labelling systems may include:	batch code
	bar code
	identification numbering systems
	serial numbers
	symbols for safe handling
	ADG and HAZCHEM Codes
Hazards in the work area may include:	chemicals
	dangerous or hazardous substances
	movements of equipment, goods and materials
	oil or water on floor
	a fire or explosion
	damaged packaging or pallets
	debris on floor
	faulty racking
	poorly stacked pallets
	faulty equipment
Communication in the work area may include:	phone
	electronic data interchange (EDI)
	fax
	email
	internet
	RF systems
	oral, aural or signed communications
Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:	company procedures
	enterprise procedures
	organisational procedures
	established procedures

Personal protective equipment may include:	<ul style="list-style-type: none">glovessafety headwear and footwearsafety glassestwo-way radioshigh visibility clothing
Consultative processes may involve:	<ul style="list-style-type: none">other employees and supervisorssuppliers, customers and clientsrelevant authorities and institutionsmanagement and union representativesindustrial relations and OH&S specialistsother maintenance, professional or technical staff
Information/documents may include:	<ul style="list-style-type: none">goods identification numbers and codesmanifests, picking slips, merchandise transfers, stock requisitions and bar codescodes of practice and regulations relevant to the identification, handling and stacking of goodsAustralian and international regulations and codes of practice for the handling, stacking and transport of dangerous goods and hazardous substancesoperations manuals, job specifications and induction documentationmanufacturers specifications for equipmentworkplace procedures and policiessupplier and/or client instructionsdangerous goods declarations and material safety data sheets (where applicable)award, enterprise bargaining agreement, other industrial arrangementsrelevant Australian standards and certification requirementsquality assurance proceduresemergency procedures
Applicable regulations and legislation may	<ul style="list-style-type: none">relevant codes and regulations for the

include:

packaging of goods

Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:

Australian and international dangerous goods codes

Australian and international explosives codes

licence, patent or copyright arrangements

water and road use and licence arrangements

export/import/quarantine/bond requirements

relevant state/territory OH&S and environmental protection legislation

workplace relations regulations

workers compensation regulations

Unit Sector(s)

Not applicable.

Competency Field

A - Handling Cargo/Stock

TLIA2107C Despatch stock

Modification History

Not applicable.

Unit Descriptor

This unit involves the skills and knowledge required to despatch stock in accordance with workplace requirements including analysing orders to identify work requirements, following workplace order picking processes to prepare goods for despatch, and completing despatch tasks in accordance with workplace procedures and schedules.

Application of the Unit

Work must be carried out in accordance with codes/regulations and workplace requirements relevant to the despatch of goods.

Work is performed under some supervision generally within a team environment. It involves the application of regulatory requirements and workplace procedures to despatch operations in the warehousing, distribution and/or storage industries.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this competency is packaged will assist in identifying employability skill requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Analyse order to identify work requirements	1.1 Order request and consignment note documentation is interpreted 1.2 Required schedules for despatch are identified 1.3 Product(s) in order are identified 1.4 Workplace and product knowledge is used to plan sequence of work 1.5 Appropriate materials handling equipment is selected within required OH&S regulations and timeframe for the despatch
2 Follow workplace order picking processes to prepare goods for despatch	2.1 Goods for despatch are selected, checking against product knowledge, labels and other identification systems 2.2 Products are sorted, assembled and consolidated 2.3 Orders are secured and placed in storage/despatch zones, in accordance with schedule 2.4 Order is checked against despatch schedule and order form
3 Complete despatch following workplace procedures and schedules	3.1 Workplace records are completed, and labels and appropriate documentation attached 3.2 Load labels and documentation are checked and loading is organised in accordance with workplace procedures and ADG Code (where applicable) 3.3 Final check of load labels and documentation is completed in accordance with requirements 3.4 Transportation requirements are described to driver where appropriate

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

Regulations relevant to despatch operations, including the ADG Code and relevant bond, quarantine or other legislative requirements

Relevant OH&S and environmental protection procedures and guidelines

Workplace procedures and policies for the organising of despatch operations

Focus of operation of work systems, equipment, management and site operating systems for despatching goods

Problems that may occur when despatching goods and appropriate action that can be taken to resolve the problems

Documentation and record requirements for despatch operations

Equipment used during despatch operations and the precautions and procedures that should be followed in its use

Housekeeping standards procedures required in the workplace

Site layout and obstacles

Required skills:

Communicate effectively with others when organising despatch operations

Read and comprehend simple statements in English

Read and interpret instructions, procedures and labels relevant to the organising of despatch operations

Complete documentation related to the organising of despatch operations

Work collaboratively with others when organising despatch operations

Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others

Promptly report and/or rectify any identified problems that may occur when organising despatch operations in accordance with regulatory requirements and workplace procedures

Apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities

Monitor work activities in terms of planned schedule

Modify activities depending on differing operational contingencies, risk situations and environments

Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment

Operate and adapt to differences in goods and equipment in accordance with standard operating procedures

Select and use relevant equipment and communications technology when organising despatch operations

Select and use required personal protective equipment conforming to industry and OH&S standards

Estimate the size, shape and special requirements of goods and loads

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:

- the underpinning knowledge and skills
- relevant legislation and workplace procedures
- other relevant aspects of the range statement

Context of and specific resources for assessment

Performance is demonstrated consistently over a period of time and in a suitable range of contexts

Resources for assessment include:

- a range of relevant exercises, case studies and other simulated practical and knowledge assessment, and/or

- access to an appropriate range of relevant operational situations in the workplace

In both real and simulated environments, access is required to:

- relevant and appropriate materials and/or equipment, and/or

- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

Assessment of this unit must be undertaken by a registered training organisation

As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests

Practical assessment must occur:

- through appropriately simulated activities at the registered training organisation, and/or

- in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Work may be conducted:	in a range of work environments by day or night
Customers may be:	internal or external
Workplaces may comprise:	large, medium or small worksites
Work may be conducted in:	limited or restricted spaces exposed conditions controlled or open environments
Goods to be despatched may involve:	special handling, location, storage and/or packaging requirements, including temperature controlled goods, dangerous goods or hazardous substances
Problems that may occur when despatching an order include:	wrong stock is despatched wrong carton for order incorrect location damaged stock no stock at location incorrect quantity failing to meet a special order requirement failing to meet customers delivery requirements
Special order requirements may include:	pricing special packing specific size of carton special categories of stock
Hazards in the work area may include:	chemicals dangerous or hazardous substances movements of equipment, goods and materials

	oil or water on floor
	a fire or explosion
	damaged packaging or pallets
	debris on floor
	faulty racking
	poorly stacked pallets
	faulty equipment
Communication in the work area may include:	phone
	electronic data interchange (EDI)
	fax
	email
	internet
	RF communications
	barcode readers
	oral, aural or signed communications
Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:	company procedures
	enterprise procedures
	organisational procedures
	established procedures
Personal protective equipment may include:	gloves
	safety headwear and footwear
	safety glasses
	two-way radios
	high visibility clothing
Consultative processes may involve:	workplace personnel
	supervisors and managers
	customers/clients
	drivers and agents
	contractors
	official representatives
Information/documents may include:	goods identification numbers and codes
	manifests, picking slips, merchandise

transfers, stock requisitions and bar codes
manufacturers specifications for equipment/tools
workplace procedures and policies
supplier and/or client instructions
dangerous goods declarations and material safety data sheets (where applicable)
codes of practice including the National Standards for Manual Handling and the Industry Safety Code
relevant legislation, regulations and related documentation including the ADG Code
award, enterprise bargaining agreement, other industrial arrangements
standards and certification requirements
quality assurance procedures
emergency procedures

Applicable regulations and legislation may include:

relevant codes and regulations pertaining to the organising of despatch operations
Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:

Australian and International Dangerous Goods Codes

Australian Marine Orders and the International Maritime Dangerous Goods Code

IATA Dangerous Goods by Air regulations

Australian and International Explosives Codes

relevant state/territory OH&S legislation

relevant state/territory environmental protection legislation

licence, patent or copyright arrangements

water and road use and licence arrangements

export/import/quarantine/bond requirements

workplace relations regulations

workers compensation regulations

Unit Sector(s)

Not applicable.

Competency Field

A - Handling Cargo/Stock

TLID1007C Operate a forklift

Modification History

Not applicable.

Unit Descriptor

This unit involves the skills and knowledge required to operate a forklift, including checking forklift condition, driving the forklift to fulfil operational requirements, monitoring site conditions, and monitoring and maintaining forklift performance. Assessment of this unit will usually be undertaken within a licensing examination conducted by, or under the authority of, the relevant state/territory OH&S authority.

Application of the Unit

Operation of a forklift must be carried out in compliance with the licence requirements and regulations of the relevant state/territory authority.

Operation of a forklift is performed under some supervision, generally within a team environment. It involves the application of routine equipment operation principles and procedures to maintain the safety and operation of a forklift in a variety of operational contexts.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not applicable.

Employability Skills Information

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this competency is packaged will assist in identifying employability skill requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Check forklift condition	<p>1.1 Condition of forklift is checked for compliance with OH&S and workplace requirements for warning devices, manufacturers specifications and the nature of the load shifting task</p> <p>1.2 Attachments are checked to ensure appropriate adjustment and operation</p> <p>1.3 Mirrors and seats are adjusted for safe operation by the driver</p> <p>1.4 Log books are checked and appropriate workplace documentation is completed in accordance with workplace requirements</p>
2 Drive the forklift	<p>2.1 Forklift is started, steered, manoeuvred, positioned and stopped in accordance with regulations and manufacturers instructions</p> <p>2.2 Engine power is managed to ensure efficiency and performance and to minimise engine and gear damage</p> <p>2.3 Operational hazards are identified and/or anticipated and avoided or controlled through defensive driving and appropriate hazard control techniques</p> <p>2.4 Forklift is driven in reverse, maintaining visibility and achieving accurate positioning</p> <p>2.5 The forklift is parked, shut down and secured in accordance with manufacturers specifications, regulations and workplace procedures</p>
3 Operate a forklift to handle loads	<p>3.1 The lifting task to be undertaken is appropriately planned and the correct lifting truck and attachments are selected</p> <p>3.2 The load is lifted, carried, lowered and set down in accordance with OH&S legislation, manufacturers specifications and company procedures</p>

- 4 **Monitor site conditions**
 - 4.1 When selecting the most efficient route, hazards and traffic flow are identified and appropriate adjustments are made
 - 4.2 Site conditions are assessed to enable safe operations and to ensure no injury to people or damage to property, equipment, loads or facilities occurs

- 5 **Monitor and maintain forklift performance**
 - 5.1 Performance and efficiency of vehicle operation is monitored during use
 - 5.2 Defective/irregular performance and malfunctions reported to relevant personnel
 - 5.3 Forklift records are maintained/updated in accordance with workplace procedures and legislative requirements

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

Relevant duty of care requirements pertaining to the operation of a forklift

Relevant OH&S and environmental procedures and regulations

Workplace operating procedures

Forklift controls, instruments and indicators and their use

Forklift handling procedures

Procedures to be followed in the event of an operational emergency

Engine power management and safe operating strategies

Efficient driving techniques

Operating hazards and related defensive driving and hazard control techniques

Pre-operational checks carried out on forklift and related action

Principles of stress management when driving a forklift

Site layout and obstacles

Required skills:

Communicate effectively with others when operating a forklift

Read and interpret instructions, procedures, information and signs relevant to the operation of a forklift

Interpret and follow operational instructions and prioritise work

Complete documentation related to the operation of a forklift

Operate electronic communication equipment to required protocol

Work collaboratively with others when operating a forklift

Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others

Promptly report and/or rectify any identified problems, faults or malfunctions in accordance with regulatory requirements and workplace procedures

Implement contingency plans for unexpected events when operating a forklift

Apply precautions and required action to minimise, control or eliminate hazards that may exist during the operation of a forklift

Monitor work activities in terms of planned schedule

Modify activities depending on differing operational contingencies, risk situations and environments

Apply fatigue management knowledge and techniques

Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment

Operate and adapt to differences in equipment in accordance with standard operating procedures

Select and use required personal protective equipment conforming to industry and OH&S standards

Identify points of balance and safe lifting positions on a range of loads when operating a forklift (including accessories)

Monitor performance of forklift and its equipment and take appropriate action where required

Ensure that a forklift and its equipment are maintained in terms of service schedule and standard operating procedures

Check and replenish fluids and carry out lubrication processes in the course of work activities

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:

- the underpinning knowledge and skills
- relevant legislation and workplace procedures
- other relevant aspects of the range statement

Context of and specific resources for assessment

Performance is demonstrated consistently over a period of time and in a suitable range of contexts

Resources for assessment include:

- a range of relevant exercises, case studies and other simulated practical and knowledge assessment, and/or

- access to an appropriate range of relevant operational situations in the workplace

In both real and simulated environments, access is required to:

- relevant and appropriate materials and/or equipment, and/or

- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

Assessment of this unit must be undertaken by a registered training organisation

As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests

Practical assessment must occur:

- through appropriately simulated activities at the registered training organisation, and/or

- in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

Types of forklift may include:

- counterbalance trucks
- reach trucks
- pallet trucks

Operations may be carried out in typical forklift operational situations, including:

- operations conducted at day or night
- typical weather conditions
- on the open road
- on a private road or worksite
- while at a workplace

Customers may be:

- internal or external

Workplaces may comprise:

- large, medium or small worksites

Work may be conducted in:

- restricted spaces
- exposed conditions
- controlled or open environments

Loads to be shifted may require:

- special precautions

Loads to be shifted may be:

- irregularly shaped
- packaged or unpackaged
- labelled or unlabelled
- palletted or unpalletted

Hazards in the work area may include exposure to:

- chemicals
- dangerous or hazardous substances
- movements of equipment, goods and materials

Personnel in the work area may include:

- workplace personnel
- site visitors
- contractors
- official representatives

Forklift handling procedures may include:	<ul style="list-style-type: none">starting a forkliftsteering and manoeuvring a forkliftaccelerating and brakingpositioning and stopping a forkliftreversing a forkliftoperating forklift controls, instruments and indicatorsusing defensive driving techniquesmanaging engine performance
Pre-operational checks may include:	<ul style="list-style-type: none">visual check of forkliftchecking and topping up of fluid levelschecks of tyreschecks of operation of forklift lights and indicatorschecks of brakes
Hazards may include (examples only):	<ul style="list-style-type: none">wet and iced operating surfacesoil on operating surfacefaulty brakesworkplace obstacles and other operational equipment and vehiclesdamaged loads and palletsother personnel in work area
Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:	<ul style="list-style-type: none">company proceduresenterprise proceduresorganisational proceduresestablished procedures
Personal protection equipment may include:	<ul style="list-style-type: none">glovessafety headwear and footwearsafety glassestwo-way radioshigh visibility clothing
Information/documents may include:	<ul style="list-style-type: none">goods identification numbers and codes, including IMDG markings and HAZCHEM

signs

manifests, bar codes, picking slips,
merchandise transfers, stock requisitions,
goods and container identification

Australian Standard 2359 - Industrial Truck
Code

manufacturers specifications for forklift and
associated equipment

operations and service record book or log

workplace procedures and policies for the
operation of forklifts

supplier and/or client instructions

ADG Code and material safety data sheets

regulatory requirements concerning the use
of forklifts

award, enterprise bargaining agreement,
other industrial arrangements

standards and certification requirements

quality assurance procedures

emergency procedures

Applicable procedures and codes may
include:

relevant state/territory regulations pertaining
to the operation of forklifts

relevant codes and standards, including
Australian Standard 2359 - Industrial Truck
Code

relevant state/territory OH&S legislation

relevant state/territory fatigue management
regulations

relevant state/territory environmental
protection legislation

Unit Sector(s)

Not applicable.

Competency Field

D - Load Handling

TLID207C Shift a load using manually-operated equipment

Modification History

Not applicable.

Unit Descriptor

This unit involves the skills and knowledge required to shift loads using manually-operated mechanical equipment, including assessing the risks associated with relocating the load, planning the relocation process and carrying out the relocation with the aid of the equipment in accordance with the plan.

Application of the Unit

Work must be carried out in compliance with the relevant OH&S regulations concerning the shifting and movement of loads using manually-operated equipment.

Work is performed under some supervision generally within a team environment. It involves the application of the basic principles for the safe shifting of loads using manually-operated equipment.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

The required outcomes described in this unit of competency contain applicable facets of Employability Skills. The Employability Skills Summary of the qualification in which this competency is packaged will assist in identifying employability skill requirements.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Assess risks arising from the relocation of the load	<ul style="list-style-type: none">1.1 Products, goods or materials to be relocated are identified1.2 Location for storage is determined1.3 Routes to be followed are identified1.4 Points of balance are estimated1.5 Effect of moving contents which may be loose, liquid, dangerous or hazardous are considered1.6 Potential risks in route(s) which may be followed are considered1.7 Lifting equipment to minimise potential risks is identified1.8 Appropriate personal protective equipment is worn
2 Plan load relocation	<ul style="list-style-type: none">2.1 Load shifting equipment is selected in accordance with workplace procedures2.2 Safe procedures for using lifting equipment are identified, including the calculation of Safe Working Load (SWL) and/or Working Load Limit (WLL) for weight of goods to be moved2.3 Process for relocating load is proposed including predicting and planning for potential difficulties2.4 Proposed process is checked against relevant code of practice and workplace procedures for compliance2.5 Lifting equipment and accessories are checked for safe operation in accordance with manufacturers instructions and workplace procedures
3 Relocate load	<ul style="list-style-type: none">3.1 Any unsafe equipment is reported to appropriate personnel in accordance with workplace procedures3.2 Planned process and route are followed using

equipment within necessary range of limitations

- 3.3 Relocated materials are set down without damage to goods, personnel or equipment and checked for stability
- 3.4 Relocation is checked to see that it meets work requirements, and any variances are reported
- 3.5 Equipment is returned to storage area in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

Relevant OH&S procedures and guidelines concerning the use of manually-operated equipment to shift loads

Risks when using manually-operated equipment to shift loads and related precautions to control the risk

Workplace procedures and policies for the shifting of goods and materials using manually-operated equipment

Problems that may arise when using manually-operated equipment to shift loads and actions that should be taken to prevent or solve them

Housekeeping standards procedures required in the workplace

Site layout and obstacles

Required skills:

Communicate effectively with others when using manually-operated equipment to shift loads

Read and interpret instructions, procedures, information and signs relevant to the shifting of loads using manually-operated equipment

Interpret and follow operational instructions and prioritise work

Complete documentation related to work activities

Work collaboratively with others when using manually-operated equipment to shift loads

Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others

Promptly report and/or rectify any identified problems that may arise when using manually-operated equipment to shift loads in accordance with regulatory requirements and workplace procedures

Apply precautions and required action to minimise, control or eliminate hazards that may exist during the shifting of loads using manually-operated equipment

Monitor work activities in terms of planned schedule

Modify activities depending on differing operational contingencies, risk situations and environments

Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment

Operate and adapt to differences in equipment in accordance with standard operating procedures

Select and use required personal protective equipment conforming to industry and OH&S standards

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:

- the underpinning knowledge and skills
- relevant legislation and workplace procedures
- other relevant aspects of the range statement

Context of and specific resources for assessment

Performance is demonstrated consistently over a period of time and in a suitable range of contexts

Resources for assessment include:

- a range of relevant exercises, case studies and other simulated practical and knowledge assessment, and/or

- access to an appropriate range of relevant operational situations in the workplace

In both real and simulated environments, access is required to:

- relevant and appropriate materials and/or equipment, and/or

- applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

Assessment of this unit must be undertaken by a registered training organisation

As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests

Practical assessment must occur:

- through appropriately simulated activities at the registered training organisation, and/or

- in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

The shifting operations may be conducted:	in a range of work environments by day or night
Customers may be:	internal or external
Workplaces may comprise:	large, medium or small worksites
Work may be conducted in:	restricted spaces exposed conditions controlled or open environments
Materials to be shifted may include:	goods equipment and tools cleaning materials components and parts of vehicles and equipment such as tyres, batteries, lifting gear, etc. materials used in the course of work such as drums of fuel, raw materials, packaging, etc.
Loads to be shifted may be:	irregularly shaped packaged or unpackaged labelled or unlabelled palletted or unpalletted
Hazards in the work area may include exposure to:	chemicals dangerous or hazardous substances movements of equipment, goods and materials
Personnel in the work area may include:	workplace personnel site visitors contractors official representatives
Communication in the work area may	phone

include:	electronic data interchange fax email internet radio oral, aural or signed communications
Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:	company procedures enterprise procedures organisational procedures established procedures
Personal protective equipment may include:	gloves safety headwear and footwear safety glasses two-way radios high visibility clothing
Information/documents may include:	goods identification numbers and codes manifests, bar codes, goods and container identification manufacturers instructions concerning the use and servicing of manually-operated load shifting equipment workplace procedures and policies supplier and/or client instructions material safety data sheets codes of practice including the National Standards for Manual Handling and the Industry Safety Code relevant legislation, regulations and related documentation award, enterprise bargaining agreement, other industrial arrangements standards and certification requirements quality assurance procedures emergency procedures

Applicable regulations and legislation may include:

relevant state/territory OH&S legislation
relevant state/territory environmental protection legislation
workplace relations regulations
workers compensation regulations
licence, patent or copyright arrangements
dangerous goods and air freight regulations
export/import/quarantine/bond requirements
marine orders

Unit Sector(s)

Not applicable.

Competency Field

D - Load Handling

TLID307E Handle dangerous goods/hazardous substances

Modification History

Not applicable.

Unit Descriptor

This unit involves the skills and knowledge required to handle dangerous goods and hazardous substances, including identifying requirements for working with dangerous goods and/or hazardous substances; confirming site incident procedures; and selecting handling techniques. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

Application of the Unit

This unit covers anyone working in the transport, warehousing, distribution and storage industries who may handle dangerous goods and/or hazardous substances.

Work must be carried out in compliance with the relevant Occupational Health&Safety (OH&S) regulations concerning the safe handling of dangerous goods and hazardous substances.

Work is performed under general supervision. It involves the application of the codes of practice and established procedures for the safe handling of dangerous goods and hazardous substances.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Identify requirements for working with dangerous goods and/or hazardous substances	<p>1.1 Dangerous goods and/or hazardous substances are identified from information including class labels, manifests and other documentation</p> <p>1.2 Storage requirements for hazardous substances and/or dangerous goods are identified and applied</p> <p>1.3 Legislative requirements for hazardous substances and/or dangerous goods are known and used to plan work activities</p> <p>1.4 Handling procedures for different classes and characteristics of goods are observed</p> <p>1.5 Confirmation is sought from relevant personnel where dangerous goods or hazardous materials do not appear to be appropriately marked</p>
2 Confirm site incident procedures	<p>2.1 Incident reporting processes are identified</p> <p>2.2 Emergency equipment is located and checked according to workplace procedures and statutory regulations</p> <p>2.3 Emergency procedures are identified and confirmed</p>
3 Select handling techniques	<p>3.1 Load handling and shifting procedures are selected in accordance with identified requirements for particular goods</p> <p>3.2 Handling equipment is checked for conformity with workplace requirements and manufacturers guidelines</p> <p>3.3 Where relevant, suitable signage is checked for compliance with workplace procedures</p>

Required Skills and Knowledge

REQUIRED KNOWLEDGE AND SKILLS

This describes the essential knowledge and skills and their level required for this unit.

Required knowledge:

All relevant regulations and codes concerning the handling of dangerous goods and hazardous substances

Application of relevant aspects of current Australian Dangerous Goods Code and relevant Australian Standards

Permit and licence requirements

Workplace procedures for handling and storing dangerous goods/hazardous substances

Problems that may arise during the handling of dangerous goods and hazardous substances and actions that should be taken to prevent or solve them

Risks when handling dangerous goods and hazardous substances and related precautions to control the risk

Equipment applications, capacities, configurations, safety hazards and control mechanisms

Housekeeping standards procedures required in the workplace

Required skills:

Communicate effectively with others when handling dangerous goods and hazardous substances

Read and interpret instructions, procedures, regulations, information and signs relevant to the handling of dangerous goods and hazardous substances

Identify containers and goods coding, markings and, where applicable, emergency information panels for the mode of transport storage selected

Interpret and follow operational instructions and prioritise work

Complete documentation related to work activities

Operate electronic communication equipment to required protocol

Work collaboratively with others when handling dangerous goods and hazardous substances

Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others

Promptly report and/or rectify any identified problems, faults or malfunctions that may occur when handling dangerous goods and hazardous substances in accordance with regulatory requirements and workplace procedures

Plan own work including predicting consequences and identifying improvements

Implement contingency plans for unanticipated situations that may arise when handling dangerous goods and hazardous substances

Recognise hazards and apply precautions and required action to minimise, control or eliminate hazards that may exist during the handling of dangerous goods and hazardous substances

Monitor work activities in terms of planned schedule

Modify activities depending on differing operational contingencies, risk situations and environments

Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment

Operate and adapt to differences in equipment in accordance with standard operating procedures

Select and use required personal protective equipment conforming to industry and OH&S standards

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of :

identifying dangerous goods/hazardous substances (from labels, International Maritime Dangerous Goods (IMDG) markings, HAZCHEM signs and other relevant identification criteria)

identifying and selecting the safety requirements for handling dangerous goods/hazardous substances

maintaining workplace records and documentation

determining (any) required permits

identifying job and site hazards and planning work to minimise risks

selecting appropriate equipment and work systems including personal protection equipment

estimating weight and dimensions of load and any special requirements

identifying and assessing handling and storage precautions and requirements for dangerous goods/hazardous substances

Context of and specific resources for assessment

Performance is demonstrated consistently over a period of time and in a suitable range of contexts

Resources for assessment include:

a range of relevant exercises, case studies and other simulated practical and knowledge assessment, and/or

access to an appropriate range of relevant operational situations in the workplace

In both real and simulated environments,

access is required to:

relevant and appropriate materials and/or equipment, and/or

applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

Method of assessment

Assessment of this unit must be undertaken by a registered training organisation

As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests

Practical assessment must occur:

through appropriately simulated activities at the registered training organisation, and/or

in an appropriate range of situations in the workplace

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

The dangerous goods may be handled in a range of work environments by day or night and may be:	for short-term storage for long-term storage in transit
Customers may be:	internal or external
Workplace environment may include:	movement of equipment movement of goods materials and vehicular traffic
Requirements for work may include:	site restrictions and procedures use of safety and personal protective equipment communications equipment specialised lifting and/or handling equipment incident breakdown procedures authorities and permits hours of operations noise restrictions additional gear and equipment segmentation procedures emergency procedures, including response to spillage/leaks, evacuation and firefighting
Hazards may include:	hazardous or dangerous materials contamination of, or from, materials being handled noise, light, energy sources stationary and moving machinery, parts or components service lines spills, leakages, ruptures fire or ignition

	dust/vapours
Hazard management is:	consistent with the principle of hierarchy of control with elimination, substitution, isolation and engineering control measures being selected before safe working practices and personal protective equipment
Consultative processes may involve:	other employees and supervisors suppliers, potential customers and existing clients representatives of regulatory authorities with jurisdiction over OH&S, dangerous goods and hazardous substances management and union representatives industrial relations and OH&S specialists other maintenance, professional or technical staff
Personnel in the work area may include:	workplace personnel site visitors contractors official representatives
Identification of goods may be from:	material safety data sheets packaging labels manifests stock lists HAZCHEM interpretative advice
Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:	company procedures enterprise procedures organisational procedures established procedures
Personal protective equipment may include:	gloves safety headwear and footwear safety glasses mask and respirator protective clothing

Information/documents may include:

breathing apparatus

goods identification numbers and codes
manifests, stock lists, packaging labels, bar codes, stock lists

goods and container identification

workplace procedures and policies concerning the handling of dangerous goods and hazardous substances

supplier and/or client instructions

material safety data sheets (MSDS)

current Australian Dangerous Goods Code

HAZCHEM interpretative advice

relevant legislation, codes, regulations and related documentation concerning the handling of dangerous goods and hazardous substances

award, enterprise bargaining agreement, other industrial arrangements

standards and certification requirements

quality assurance procedures

emergency procedures pertaining to dangerous goods and hazardous substances

Applicable regulations and legislation may include:

relevant Australian and state/territory regulations relating to the handling of dangerous goods and hazardous substances

current Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances, including:

Australian and International Dangerous Goods Codes

Australian Marine Orders and the International Maritime Dangerous Goods Code

International Air Transport Association (IATA) Dangerous Goods by Air regulations

Australian and International Explosives Codes

all relevant Australian Standards
relevant state/territory OH&S legislation
workplace relations regulations
equal employment opportunity and
affirmative action legislation
equal opportunity legislation
relevant state/territory environmental
protection legislation

Unit Sector(s)

Not applicable.

Competency Field

D - Load Handling