



Australian Government

MSFFDM5001 Construct custom furniture using advanced techniques

Release: 1

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Modification History

Release 1. Unit code and Application changed. Elements and Performance Criteria changed to active voice and reviewed. Range of Conditions removed and relevant content moved to Assessment Requirements. Assessment Requirements changed to remove duplication with Performance Criteria. Supersedes and is equivalent to MSFFDT5004 Construct custom furniture using advanced techniques.

Application

This unit describes the skills and knowledge required to construct original and unique custom furniture using or adapting traditional and innovative construction techniques. It includes interpreting and adapting design specifications that are compatible with the product material, purpose and style of the furniture.

This unit applies to individuals working in a manufacturing or design studio environment who construct custom furniture, either alone or as part of an internal or external team.

No licensing or legislative or certification requirements apply to this unit at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Competency Field

Workshop practice

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for work	1.1 Verify and ensure compliance with relevant legislative, work health and safety and workplace requirements related to constructing custom furniture 1.2 Read and interpret job specifications and other relevant documentation to identify furniture construction and finishing requirements 1.3 Select and check tools, equipment and materials prior to use to ensure that they are appropriate for work, serviceable and in safe condition 1.4 Identify product purpose, context, furniture style and construction

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	materials 1.5 Plan and document work sequence covering each step in construction process, including sub-assemblies, in accordance with workplace requirements 1.6 Develop and document quality-checking procedures for each step in construction process
2. Curve and shape components	2.1 Identify, evaluate and confirm techniques for bending, forming and shaping components as being appropriate for construction requirement 2.2 Set out component specifications in accordance with work instructions and mark materials in accordance with industry practices 2.3 Use tools, machines and equipment in accordance with safety requirements and manufacturer specifications 2.4 Bend, form and shape materials in accordance with production plan and workplace procedures 2.5 Check components against specified tolerances, fit and accuracy
3. Veneer components	3.1 Identify, evaluate and select suitable veneer material from design specifications 3.2 Use tools, machines and equipment in accordance with safety requirements and manufacturer specifications 3.3 Measure, mark and cut veneer components to size based on job specifications 3.4 Prepare and lay out veneers for application 3.5 Select and prepare suitable joining processes for backing and adjacent veneers 3.6 Apply adhesives in accordance with workplace procedures or manufacturer instructions 3.7 Produce rough veneering components in accordance with production plan and workplace procedures 3.8 Complete final trim and finishing to specifications 3.9 Check work against required quality standards, and rectify any non-conformance
4. Make joints	4.1 Identify joints requirements and select type of joint to be used and adapt/design as necessary 4.2 Select tools, adhesives and fasteners to match joint type

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	4.3 Mark out cutting and joining lines to suit joint type 4.4 Check measurements and calculations for accuracy to ensure quality outcomes 4.5 Identify material features and observe optimal usage criteria 4.6 Cut material to specification, and inspect and prepare for joining 4.7 Join material in accordance with job specifications 4.8 Use fasteners and adhesives to make joints firm where required and in accordance with workplace procedures 4.9 Check finished joint against quality requirements
5 Construct sub-assemblies	5.1 Lay out components and materials, including adhesives, trims and accessories, and tools, in accordance with assembly plan 5.2 Check components against specification prior to assembly and reject items out of specification 5.3 Assemble sub-assemblies using appropriate tools, jigs and fixtures and check against specification for accuracy, fit, twist and distortion 5.4 Check sub-assembly quality against plans at identified checkpoints
6. Assemble custom furniture	6.1 Lay out components, sub-assemblies and materials, including adhesives, trims and accessories, and tools, in accordance with assembly plan 6.2 Check components and sub-assemblies against specification prior to assembly and reject items out of specification 6.3 Assemble components, fit using appropriate tools, jigs and fixtures, and check against specification for accuracy, fit, twist and distortion 6.4 Apply hardware and decorative accessories to specification 6.5 Prepare product for final finish, including the removal of bruises, scratches, dents and marks 6.6 Check product quality against plans at identified checkpoints
7. Finish furniture surface	7.1 Using samples of the type of material surface and specified finish, evaluate various finishing options and select the preferred option 7.2 Test sample of material with selected finishing technique to ensure appropriateness 7.3 Prepare furniture surface in accordance with finishing specification 7.4 Rectify imperfections, pores or nail or screw holes on surface

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	7.5 Apply finishing processes and materials in accordance with agreed specifications 7.6 Polish or buff surface depending on shine required from specification 7.7 Check work against required quality standards 7.8 Rectify any non-conformity with required quality standards
8. Complete housekeeping	8.1 Store or recycle unused materials as required 8.2 Clean and store tools and equipment in accordance with procedures 8.3 Tag and report faulty or defective equipment in accordance with workplace practices 8.4 Clean and clear work area in accordance with workplace procedures 8.5 Complete workplace documentation, including time log for operations for costing and business improvement activities.

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in performance criteria.

- Numeracy skills to interpret technical information and perform calculations including measurements
- Reading skills to interpret job specifications
- Writing skills to complete workplace documentation.

Other foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Release 1. Supersedes and equivalent MSFFDT5004 Construct custom furniture using advance techniques.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

Assessment Requirements for MSFFDM5001 Construct custom furniture using advanced techniques

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Performance Evidence

There must be evidence the candidate has completed the tasks outlined in the elements and performance criteria of this unit, and demonstrated the ability to:

- complete all aspects of the construction and finishing of two furniture items requiring advanced construction techniques and satisfying high-quality custom-made furniture standards and expectations in terms of innovation, complexity, tolerance and fit of components and quality.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- types of tools and equipment used in construction and procedures for their safe use, operation and maintenance
- workflow techniques appropriate for the management of the construction work/project
- presentation and interpretation of plan representation of a furniture design
- techniques for timber bending, forming and shaping including:
 - steam/heat bending
 - curfing
 - pressure bending
 - shaping by hand or static machine
- techniques for the preparation of drawings or set-outs or rods and geometrical concepts
- types, characteristics, uses and limitations of materials
- techniques for the manufacture and application of veneers
- techniques for assembly, fixing and finishing of custom furniture components
- types, characteristics, uses, limitations and safety requirements of adhesives, fasteners and hardware used in custom furniture assembly
- matching requirements of adhesives and fasteners to timbers/materials used
- finishing techniques
- characteristics, properties and selection criteria of finishing materials
- finishing characteristics and properties of timber being used

- applicable work health and safety, legislative and workplace requirements relevant to constructing custom furniture are verified and complied with.

Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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