Australian Government

MEM40311 Certificate IV in Advanced Jewellery Manufacture

Release 2

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

MEM40311 Certificate IV in Advanced Jewellery Manufacture

Modification History

Release 2 - Imported elective unit BSBSMB405A replaced by BSBSMB405B. No change in outcomes.
Release 1 - New qualification

Description

This qualification has been specifically developed to be delivered to people who are existing jewellery tradespersons or apprentices in a jewellery-related trade who choose to study at a higher level during their apprenticeship. The qualification packaging has been developed on an assumption that competency will be developed through a combination of on and off the job learning strategies. The qualification may also be achieved through formal skills recognition processes.

Job roles/employment outcomes

The MEM40311 Certificate IV in Advanced Jewellery Manufacture specifies the competencies required for employment as a Higher Engineering Tradesperson or a Special Class Engineering Tradesperson – Level II in jewellery-related disciplines, Jeweller Tradesperson Special Class, or related classification depending on the Award or Agreement.

The job role involves application of additional skills in the jewellery trade including, gem setting, engraving or jewellery manufacturing skills. Employment outcomes related to this qualification are found in jewellery manufacturing and retail and wholesale jewellery enterprises.

Application

This qualification is typically used to develop skill and knowledge in the application of specialised jewellery manufacturing trade and related skills within jewellery-related enterprises.

Pathways Information

Pathways into the qualification

This qualification may be accessed by direct entry. Credit for relevant units of competency should be granted towards this qualification for those who have completed MEM30605 Certificate III in Jewellery Manufacture, other relevant qualifications or achieved equivalent industry experience.

Pathways from the qualification

Further training pathways from this qualification include design orientated training in the Diploma and Advanced Diploma in Jewellery and Object Design or management qualifications.

Licensing/Regulatory Information

There are no specific licences that relate to this qualification. However, some units in this qualification may have licensing or regulatory requirements in some environments. Local regulations should be checked for details.

Entry Requirements

Not applicable.

Employability Skills Summary

Certificate IV in Advanced Jewellery Manufacturing

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

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	• Establish and maintain effective relationships with industry representatives and clients • Interpret industry standards, regulations and policies • Undertake client discussion to determine work requirements and job specifications • Consult with supply chain personnel to determine resource supply capabilities • Calculate job costs • Negotiate with client to establish costing and job timeframes • Sketch designs • Accurately record and interpret detailed work specifications • Complete detailed and accurate documentation and maintain records
Teamwork	• Establish and maintain cooperative and consultative relationships with clients or colleagues • Work with others in the supply chain • Provide information and feedback to others to maintain production quality • Participate in sustainability improvements
Problem-solving	• Examine risks and implement and maintain risk control measures for materials and equipment • Identify and report environmental features, regulations, insurance requirements, legal requirements and other factors which may affect the product or service to be provided • Determine and implement corrective measures for production problems and faults • Undertake maintenance of machinery and equipment • Determine work requirements and modifications • Assess quality of materials before using in work items • Produce cost-effective specifications in line with client expectations

	• Determine specific construction techniques to be used • Respond effectively to supply chain issues related to supply of resources • Investigate environmental performance and identify potential areas for improvement
Initiative and enterprise	• Develop continuous improvement of processes • Determine necessary adjustment to production techniques in line with specifications • Anticipate and address design and production issues • Investigate and apply new tools and strategies to improve resource use
Planning and organising	• Undertake effective planning of own work to achieve desired outcomes within agreed timeframes • Undertake ordering of resources and materials to ensure work flows are met • Monitor quality processes and analyse outcomes • Determine and implement contingency plans to respond to incidents and problems • Monitor and maintain equipment condition and performance
Self-management	• Manage own work plans and priorities • Manage client and industry relationships and contracts • Manage data flows and record keeping • Maintain housekeeping of workplace • Monitor and maintain own work against quality standards • Apply safety procedures, including the use of protective equipment • Monitor use of resources
Learning	• Assess own skill requirements and seek further development, if required • Develop or adjust own processes based on prior experience • Maintain currency of learning with regards to trends, jewellery design features and production techniques • Experiment with production techniques
Technology	• Monitor and maintain machine operation • Use machinery and equipment effectively, efficiently and safely • Use specialised computing equipment and software

Packaging Rules

The minimum requirements for achievement of the MEM40311 Certificate IV in Advanced

Jewellery Manufacture are:

- completion of all twelve (12) core units of competency listed below, and
- completion of elective units as described below from Groups A and B, to bring the total value to at least 109 points.

Elective units are to be chosen as follows:

- completion of Group A electives to the value of at least 12 points
- completion of Group B electives to bring the total value of elective units to 109 points.

Appropriate elective units to the value of 22 points may be chosen from other endorsed Training Packages and accredited courses where those units are available for inclusion at Certificate IV. Note that the elective units listed below include all of the units that are approved for selection from the MEM05 Training Package for use in this qualification. This meets the NQC requirement that one sixth of the total units must be able to be selected from other qualifications in the same Training Package.

Registered Training Organisations must seek a determination from Manufacturing Skills Australia in respect of the allocation of points values for units of competency drawn from other Training Packages or accredited courses.

Units with prerequisites are marked with an asterisk. Note that when selecting elective units any prerequisite units must also be completed. Points associated with prerequisites count towards the total (refer to units and prerequisites listing in Appendix 2).

Core units of competency

Complete all twelve (12) units of competency from this list.

Unit code	Unit title
MEM12023A	Perform engineering measurements
MEM12024A	Perform computations
MEM13014A	Apply principles of occupational health and safety in the work environment
MEM14004A	Plan to undertake a routine task

MEM14005A	Plan a complete activity
MEM15002A	Apply quality systems
MEM15024A	Apply quality procedures
MEM16006A	Organise and communicate information
MEM16007A	Work with others in a manufacturing, engineering or related environment
MEM16008A	Interact with computing technology
MEM17003A	Assist in the provision of on the job training
MSAENV272B	Participate in environmentally sustainable work practices

Elective units of competency

Group A - Advanced Jewellery Specialisation units

Select units from this list to the value of at least 12 points and up to a maximum of 109 points.

Unit code	Unit title	Points
MEM19023A	Apply drawing and rendering techniques to jewellery or object design	4
MEM19024A	Use CAD to create and display 3D jewellery and object models	4
MEM19025A	Create and present designs for jewellery and other 3D objects	4
MEM19026A	Investigate quality and application of jewellery materials	2
MEM19028A	Select materials and new technologies for jewellery and 3D object design applications	2
MEM19031A	Produce renderings and technical drawings for jewellery and object design construction	2

MEM19033A	Create silversmithing objects	4
MEM19034A	Apply chain manufacture process	2
MEM19035A	Plan and apply casting techniques for jewellery and object designs	4
MEM19037A	Plan and implement chenier fabrication process	2
MEM19038A	Apply traditional techniques to jewellery and 3D object production	4
MEM19044A	Repair and restore antique jewellery	4
MEM19045A	Set gems in channel style settings	4
MEM19046A	Apply grain setting techniques	4
MEM19047A	Set gems in claw and bezel style settings	4
MEM19048A	Develop and apply complex borders and decorations for hand engraving	4
MEM19049A	Develop and apply heraldic designs for hand engraving	2
MEM19050A	Hand carve engraving work	4
MEM19051A	Construct multiple stone settings*	4
MEM19052A	Produce complex objects using silversmithing techniques*	4
MEM19053A	Create complex findings and mechanisms for jewellery items*	4
MEM19054A	Fabricate platinum jewellery items	4

Group B - Jewellery Manufacture stream units

Select units from this group to bring the total value of Group A and B units to 109 points, including any prerequisites.

Unit code	Unit title	Points
MEM03001B	Perform manual production assembly	4

MEM03002B	Perform precision assembly*	4
MEM03003B	Perform sheet and plate assembly*	4
MEM03004B	Perform electronic/electrical assembly (production)	8
MEM03006B	Set assembly stations*	2
MEM05006C	Perform brazing and/or silver soldering	2
MEM06007B	Perform basic incidental heat/quenching, tempering and annealing	2
MEM07001B	Perform operational maintenance of machines/equipment*	2
MEM07005C	Perform general machining	8
MEM07024B	Operate and monitor machine/process	4
MEM07032B	Use workshop machines for basic operations*	2
MEM07040A	Set multistage integrated processes*	6
MEM08001B	Perform wire, jig and barrel load/unload work	4
MEM08002C	Pre-treat work for subsequent surface coating*	4
MEM08003C	Perform electroplating operations*	6
MEM08010B	Manually finish/polish materials*	6
MEM08011B	Prepare surfaces using solvents and/or mechanical means*	2
MEM09002B	Interpret technical drawing	4
MEM13001B	Perform emergency first aid	1
MEM13002B	Undertake occupational health and safety activities in the workplace	3
MEM13003B	Work safely with industrial chemicals and materials	2
MEM13004B	Work safely with molten metals/glass	2
MEM13010A	Supervise occupational health and safety in an industrial work environment*	4

MEM15003B	Use improvement processes in team activities*	4
MEM15004B	Perform inspection	2
MEM15015B	Examine trading practices*	5
MEM16002C	Conduct formal interviews and negotiations	4
MEM16004B	Perform internal/external customer service	2
MEM16005A	Operate as a team member to conduct manufacturing, engineering or related activities	2
MEM16011A	Communicate with individuals and small groups*	2
MEM16013A	Operate in a self-directed team*	2
MEM17001B	Assist in development and deliver training in the workplace	2
MEM17002B	Conduct workplace assessment	2
MEM18001C	Use hand tools	2
MEM18002B	Use power tools/hand held operations	2
MEM18003C	Use tools for precision work*	4
MEM18055B	Dismantle, replace and assemble engineering components*	3
MEM19001B	Perform jewellery metal casting*	6
MEM19002B	Prepare jewellery illustrations*	4
MEM19003B	Handle gem materials	2
MEM19004B	Handle and examine gemstone materials*	6
MEM19005B	Produce three-dimensional precision items*	8
MEM19006B	Replace watch batteries*	1
MEM19007B	Perform gemstone setting*	6
MEM19008B	Prepare jewellery designs*	6
MEM19009B	Perform investment procedures for lost wax casting process*	1

MEM19010B	Produce rubber moulds for lost wax casting process	2
MEM19011B	Perform wax injection of moulds for lost wax casting process	2
MEM19012B	Produce jewellery wax model	4
MEM19013B	Produce jewellery metal masters*	4
MEM19014B	Perform hand engraving*	4
MEM19015B	Perform jewellery enamelling*	4
MEM19016B	Construct jewellery components*	4
MEM19017B	Fabricate jewellery items*	6
MEM19018B	Repair jewellery items*	6
MEM19020B	Fault-find and maintain micro-mechanisms*	4
MEM19021B	Diagnose and service micro-mechanisms*	6
MEM19022B	Perform precision micro-mechanism diagnosis and servicing	6
MEM30012A	Apply mathematical techniques in a manufacturing, engineering or related environment	4
BSBSMB403A	Market the small business	4
BSBSMB405B	Monitor and manage business operations	4
BSBSMB406A	Manage small business finances	4

Custom Content Section

Not applicable.