



Australian Government

Department of Education, Employment and Workplace Relations

MEM19051A Construct multiple stone settings

Release: 1

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Modification History

New unit

Unit Descriptor

This unit of competency covers the skills and knowledge required to apply a range of jewellery making skills in the construction of jewellery that incorporates multiple stone settings.

Application of the Unit

This unit applies to construction of jewellery that features multiple stone settings and clusters and may be applied to rings, brooches, pendants, and so on. It will involve the application of a range of jewellery construction techniques, such as bezel, shank, claw and eternity rings.

Work includes use of jewellery making equipment.

Band B

Unit Weight 4

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

MEM19047A Set gems in claw and bezel style settings

MEM19045A Set gems in channel style settings

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Confirm work requirements	1.1	Clarify requirements for work
		1.2	Analyse specifications or design documentation to determine construction requirements
		1.3	Conduct research into design features, as required, to inform work
		1.4	Develop construction plan
		1.5	Estimate costs and confirm viability
2	Research multiple setting styles	2.1	Conduct research into traditional and contemporary applications of multiple stone settings
		2.2	Research jewellery styles that contain multiple stone settings used in rings, pendants, brooches and earrings
		2.3	Document findings covering trends and methods of construction
3	Construct stone setting	3.1	Source materials, equipment and components required to complete work
		3.2	Select and arrange stones or stone sizes in a manner which displays features and works in accordance with their shape and size
		3.3	Construct top plate and/or settings, layers and levels to position stones
		3.4	Mark out stones according to design requirements
		3.5	Conduct cutting, annealing, soldering, drilling and other construction techniques to accurately and neatly position

- stones in cluster setting
- 3.6 Observe occupational health and safety (OHS) requirements and safely operate all workshop equipment used
- 3.7 Perform work in a manner that minimises waste and complies with environmental requirements
- 4 Finish work
 - 4.1 Check work meets client requirements and quality standards
 - 4.2 Determine safe cleaning techniques for item to ensure features are protected from damage
 - 4.3 Clean item and prepare for presentation to client
 - 4.4 Complete documentation on work undertaken
 - 4.5 Clean up work area

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- interpreting client requirements
- measuring and marking out stones
- analysing characteristics of jewellery design
- costing work
- using jewellery manufacturing tools
- completing work by hand according to job requirements

Required knowledge

Required knowledge includes:

- range of techniques used in antique jewellery construction
- OHS principles and practices
- characteristics and responses of metals and gems used in jewellery

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	A person who demonstrates competency in this unit must be able to construct an item of jewellery that includes a multiple stone setting and is finished according to industry quality standards.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently: • implement OHS workplace procedures to safely and effectively use jewellery construction equipment and processes • plan the design and construction of stone settings • apply a range of jewellery construction techniques to complete multiple stone items of jewellery.
Context of and specific resources for assessment	• Assessment may occur on the job or in an appropriately simulated environment. Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices. • Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability. • Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities.
Method of assessment	• Assessment must satisfy the endorsed Assessment Guidelines of the MEM05 Metal and Engineering Training Package. • Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning knowledge. • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application. • Assessment may be applied under project-related conditions (real or simulated) and require evidence of

	process. • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances. • Assessment may be in conjunction with assessment of other units of competency where required.
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Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the language and literacy capacity of the candidate and the work being performed.
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Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Materials	Materials may include: • gemstones (e.g. diamond, ruby, sapphire and emerald) • ornamental materials (e.g. lapis lazuli and malachite) • biological gem materials (e.g. amber, coral and ivory), and their synthetics and imitations • rocks • non-crystalline materials (e.g. amorphous opal) • glass, plastic and composite stones • gold, silver, platinum, palladium, copper and their alloys
Multiple stone set jewellery	Multiple stone set jewellery may include: • coronet cluster rings/pendants • wire cluster rings • individual setting eternity rings • carved eternity rings • ribbon style brooches/pendants • plate setting brooches
OHS requirements	OHS requirements may include: • wearing personal protective equipment in the jewellery workshop • aprons • protective foot wear • eye protection while operating rotary equipment
Environmental requirements	Environmental requirements may relate to: • liquid waste • solid waste

	• gas, fume, vapour, smoke emissions, including fugitive emissions, and dust • excessive energy and water use • excessive noise
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Unit Sector(s)

Jewellery

Custom Content Section

Not applicable.