



**Australian Government**

# **MEM19053 Create complex findings and mechanisms for jewellery items**

**Release: 1**

# MEM19053 Create complex findings and mechanisms for jewellery items

## Modification History

Release 1. Supersedes and is equivalent to MEM19053A Create complex findings and mechanisms for jewellery items.

## Application

This unit of competency defines the skills and knowledge required to design and produce jewellery, which includes complex findings and mechanisms. It includes assessing the application of the design brief in the final outcome.

This unit applies to individuals designing jewellery in a small or large-scale production context. They use and adapt both creative and technical skills and knowledge to produce work.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band: A

Unit Weight: 4

## Pre-requisite Unit

MEM13015 Work safely and effectively in manufacturing and engineering

MEM16006 Organise and communicate information

MEM19005 Produce three-dimensional precision items

MEM19017 Fabricate jewellery items

## Competency Field

Jewellery

## 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. Determine job requirements                    | 1.1 Follow standard operating procedures (SOPs)<br>1.2 Comply with work health and safety (WHS) requirements at all times |

| <b>Elements</b>                                     | <b>Performance Criteria</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Elements describe the essential outcomes.</i>    | <i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                     | <p>1.3 Use personal protective equipment (PPE) in accordance with SOPs</p> <p>1.4 Determine client requirements for jewellery findings and mechanisms</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2. Design and develop a concept from a design brief | <p>2.1 Identify and evaluate relevant research information, references and resources to the design process</p> <p>2.2 Record concept development through drawings, notations and design options</p> <p>2.3 Prepare production plans for selected design solution and refine design in response to production considerations</p> <p>2.4 Produce a model or maquette of the selected design based on requirements of the brief</p> <p>2.5 Determine and obtain resources and equipment to undertake the task</p>                                                                                                                                                       |
| 3. Produce complex findings and mechanisms          | <p>3.1 Determine appropriate jewellery techniques and equipment through testing and experimentation</p> <p>3.2 Select and apply jewellery techniques and processes to produce the item</p> <p>3.3 Determine finding and mechanism most suitable for the design and functionality of the jewellery item</p> <p>3.4 Produce and attach finding and mechanism to the item using selected techniques</p> <p>3.5 Select and apply surface finishing techniques to the item based on design requirements and prepare for presentation to the client</p> <p>3.6 Identify and address production problems or inconsistencies based on knowledge of process and materials</p> |
| 4. Evaluate objects for meeting the design brief    | <p>4.1 Test objects for function against the design brief</p> <p>4.2 Re-work, repair or recycle non-compliant objects in accordance with workplace procedures</p> <p>4.3 Evaluate and document design processes in accordance with workplace procedures</p> <p>4.4 Clean up and maintain production environment and equipment in accordance with SOPs</p>                                                                                                                                                                                                                                                                                                            |

## Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

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

## Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

|                                                                    |                                                                                                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Appropriate personnel include one or more of the following:        | <ul style="list-style-type: none"> <li>• supervisor</li> <li>• manager</li> <li>• trainer</li> <li>• mentor</li> <li>• team member</li> <li>• client.</li> </ul>                                                                                                                                                                            |
| Findings and mechanisms include one or more of the following:      | <ul style="list-style-type: none"> <li>• catches for bracelets</li> <li>• catches for necklets</li> <li>• removable pearl enhancers or pendants</li> <li>• sliding brooch fittings and safety locks</li> <li>• threaded or hinged earring clips</li> <li>• spring-loaded mechanisms</li> <li>• multi-functional jewellery items.</li> </ul> |
| Jewellery production includes one or more of the following:        | <ul style="list-style-type: none"> <li>• maquette production</li> <li>• soldering</li> <li>• fusing</li> <li>• crimping</li> <li>• folding</li> <li>• forging</li> <li>• hinge making</li> <li>• fabricating</li> <li>• forming.</li> </ul>                                                                                                 |
| Surface finishing techniques include one or more of the following: | <ul style="list-style-type: none"> <li>• electroplating</li> <li>• planishing</li> <li>• patination</li> <li>• polishing</li> <li>• burnishing</li> <li>• heat treating.</li> </ul>                                                                                                                                                         |
| Tools and equipment include one or more of the                     | <ul style="list-style-type: none"> <li>• hammers</li> <li>• stakes</li> </ul>                                                                                                                                                                                                                                                               |

|                                                                  |                                                                                                                                                                                                                                     |
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| following:                                                       | <ul style="list-style-type: none"><li>• files</li><li>• vices.</li></ul>                                                                                                                                                            |
| Environmental requirements include one or more of the following: | <ul style="list-style-type: none"><li>• liquid waste</li><li>• solid waste</li><li>• emissions (gas, fume, vapour, smoke, fugitive emissions or dust)</li><li>• excessive energy and water use</li><li>• excessive noise.</li></ul> |

## Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM19053A Create complex findings and mechanisms for jewellery items.

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

# Assessment Requirements for MEM19053 Create complex findings and mechanisms for jewellery items

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## Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- determining customer requirements
- researching information on creating complex findings and mechanisms
- generating ideas and concepts and sketching and interpreting drawings
- preparing production plan for selected design solution, producing a model or maquette on at least two occasions and confirming with client
- determining, selecting and applying appropriate jewellery production techniques and procedures to produce complex findings and mechanisms that function appropriately on application and are to specification on at least two occasions
- preparing and maintaining jewellery tools and equipment
- applying relevant surface finishing techniques
- conducting tests and experiments for function against design brief on at least two occasions
- determining the requirements for repair or restoration, as applicable
- evaluating and documenting design processes in accordance with SOPs.

Note: Where a volume and/or frequency is not specified, demonstration must be provided at least once.

## Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- methods used to determine customer requirements
- appropriate personnel to consult throughout the process
- concept development techniques
- purpose, function and maintenance of jewellery equipment
- techniques and manufacturing methods for jewellery production
- function and application of jewellery findings and mechanisms

- tools and equipment used in producing jewellery findings and mechanisms
- surface finishing techniques
- soldering and fusing techniques for jewellery
- binding and locating techniques
- environmental consideration when producing jewellery findings and mechanisms.

## Assessment Conditions

- Assessors must:
  - have vocational competency in creating complex findings and mechanisms for jewellery items at least to the level being assessed with relevant industry knowledge and experience
  - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires.
- Where possible, assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required including relevant workplace procedures, product and manufacturing specifications.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
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