



Australian Government

Department of Education, Employment and Workplace Relations

MEM19017B Fabricate jewellery items

Release: 2

MEM19017B Fabricate jewellery items

Modification History

Prerequisite unit MEM05006B updated to MEM05006C

Unit Descriptor

Unit descriptor	This unit covers constructing jewellery components, single and multiple-piece items involving a range of fabrication processes and techniques.
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Application of the Unit

Application of the unit	This unit applies to the construction of jewellery components, single-piece and multiple-piece items involving a range of fabrication processes and techniques. It requires the ability to use jewellery tools and equipment and safe and efficient work practices to identify fabrication requirements, prepare materials/manufacture components for fabrication and fabricate and finish items. If electroplating skills are required, Unit MEM08003C (Perform electroplating operations) should also be selected. Band: A Unit Weight: 6
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM05006C	Perform brazing and/or silver soldering
	MEM06007B	Perform basic incidental heat/quenching, tempering and annealing
	MEM12023A	Perform engineering measurements
	MEM18001C	Use hand tools

Employability Skills Information

Employability skills	This unit contains employability skills.
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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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify fabrication requirements	1.1.Item design characteristics, dimensions, construction, composition and finish are established from predetermined specifications in accordance with organisational and client requirements. 1.2.Fabrication and finish specifications and required outcomes are confirmed and clarified as necessary with appropriate person(s) and in accordance with organisational requirements. 1.3.Appropriate preparation and fabrication techniques are established in accordance with item construction, verbal and written specifications, organisational requirements and personal abilities. 1.4.Fabrication and finishing activities are prioritised in accordance with designated timeframes, organisational and specific fabrication requirements.
2. Prepare materials for fabrication	2.1.Components, materials and consumables are selected/obtained in accordance with organisational requirements and in consultation with appropriate person(s). 2.2.Metals are alloyed to specified quality, as required. 2.3.Metals are rolled/drawn down/cut to required dimensions. 2.4.Tools and equipment are selected and used appropriate to job requirements and checked for operational effectiveness in accordance with manufacturers' specifications and organisational procedures. 2.5.Material preparation is conducted using safe operating practices and protective equipment, in accordance with OHS and organisational requirements.
3. Fabricate jewellery item	3.1.Tools and equipment for fabrication are selected and used appropriate to job requirements and checked for operational effectiveness in accordance with manufacturers' specifications and organisational procedures. 3.2.Applicable fabrication activities are performed using safe operating practices and protective equipment, and in accordance with OHS, organisational and industry accepted methods. 3.3.Item is checked to ensure construction conforms

ELEMENT	PERFORMANCE CRITERIA
	with required specifications, quality, organisational and applicable industry standards.
4. Finish jewellery items	4.1. The appropriate surface finish is produced to required specifications in accordance with organisational requirements. 4.2. Tools and equipment for embellishing and polishing are selected and used appropriate to job requirements and checked for operational effectiveness in accordance with manufacturers' specifications and organisational procedures.
5. Complete fabrication	5.1. Finished item is packaged/presented and stored safely in accordance with organisational requirements. 5.2. Documentation is accurately completed and processed in accordance with organisational requirements and standards. 5.3. Notification of work completion is made to appropriate person(s) in accordance with organisational procedures. 5.4. Work area, tools and equipment are cleaned and stored in accordance with OHS and organisational requirements. 5.5. Unused/excess materials are collected and stored/reclaimed in accordance with organisational requirements.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Look for evidence that confirms skills in:

- interpreting design specifications and follow instructions (oral or written)
- interpreting drawings
- weighing and measuring
- selecting appropriate tools and equipment
- selecting appropriate materials and manufacturing techniques

REQUIRED SKILLS AND KNOWLEDGE

- applying appropriate fabrication and finishing procedures
- applying safe working skills
- identifying alternative metals

Required knowledge

Look for evidence that confirms knowledge of:

- metals and materials for fabricating a range of jewellery items/designs
- common jewellery design features, constructions and finishes
- metal preparation and fabrication techniques to suit different design requirements
- factors affecting the selection of preparation and fabrication methods
- organisational requirements for fabrication activities
- relevant materials and consumables for given jewellery fabrication jobs
- properties and characteristics of applicable metals
- ratios to create required grade/quality/composition of metals
- melting temperatures and preparation methods for melting applicable metals
- types of ingot moulds and their characteristics/applications
- methods, applications, equipment types and operational requirements for rolling and drawing metals
- process for annealing metals to prevent work hardening
- procedures for checking serviceability of applicable tools and equipment
- safe operating procedure for applicable tools and equipment
- applicable fabrication techniques and processes
- organisation of customer service, quality and work standards
- accepted industry standards of quality
- tools, techniques and materials for embellishing and polishing
- organisation procedures for storage and packaging/presentation of finished items
- security measures for protection of jewellery items
- safe work practices and procedures

Evidence Guide

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 fabricate jewellery items. Competency in this unit cannot be claimed until all prerequisites have been satisfied.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.

Context of and specific resources for assessment

This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.

This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with the fabrication of fine jewellery or other units requiring the exercise of the skills and knowledge covered by this unit.

Method of assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

EVIDENCE GUIDE**Guidance information for assessment****Range Statement****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.

Appropriate person(s)	Supervisor, client, colleague
Appropriate preparation and fabrication techniques	• Cutting, folding, bending, curving, dapping, drawing, rolling, doming, annealing, melting, granulation • Primarily by brazing/silver soldering but may include other methods such as riveting
Finishing activities	Filing, emery finishing, high and satin polish, various embellishment finishes (sandblasting, brushed, burring, reticulation, burnishing etc.)
Components	Components, single-piece and multiple-piece items involving a range of fabrication processes and techniques, for example various clips, catches and pins
Materials	Precious and non-precious metals
Consumables	Solders and fluxes, drills and blades, polishing compounds, cleaning and finishing materials
Tools and equipment	All hand and power tools appropriate to fabrication of jewellery items and personal protective equipment
Documentation	Job packet, work instructions and procedures, parts and components reference material, materials and consumables used, time and record

RANGE STATEMENT

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Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Jewellery and horological
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