



Australian Government

Department of Education, Employment and Workplace Relations

MEM19016B Construct jewellery components

Release: 2

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Modification History

Prerequisite unit MEM05006B updated to MEM05006C

Unit Descriptor

Unit descriptor	This unit covers constructing jewellery components or single-piece items of basic design.
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Application of the Unit

Application of the unit	This unit applies use of common jewellery tools/equipment and safe and efficient work practices to transfer designs to templates and work pieces, produce two-dimensional patterns/blanks and form and finish components/items. Metals and consumables include precious and non-precious metals, solders and fluxes, drills and blades, polishing compounds, cleaning and finishing materials, adhesives. Band: A Unit Weight: 4
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		
Path 1	MEM05006C	Perform brazing and/or silver soldering
	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 pattern and component/item requirements	1.1. Component/item specifications are identified from work instruction. 1.2. Design requirements are identified from work instruction. 1.3. Forming, joining and finishing requirements are identified from work instruction.
2. Transfer designs to templates and work pieces	2.1. Work pieces are prepared as required for drawing transfer. 2.2. Accurate representations component specifications are transferred onto templates or work pieces. 2.3. Material wastage is minimised.
3. Produce 2D patterns/blanks	3.1. Patterns/blanks are produced to specification.
4. Form and finish components/items	4.1. The formed item conforms to design requirements. 4.2. Appropriate tools and equipment are selected for forming, joining and finishing. 4.3. Components/formed items are joined as required. 4.4. Components/items are finished to specification.

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:

- identifying component type, design, material type and specifications from verbal/written instructions, jewellery illustrations and samples
- identifying transfer method from work instruction
- selecting transfer materials, tools and equipment
- identifying required techniques/methods and steps
- selecting and using tools and equipment for forming, joining and finishing
- cutting, rolling and shaping to correct size/thickness
- transcribing markings clearly and accurately onto work piece or template
- adhering templates to work pieces

REQUIRED SKILLS AND KNOWLEDGE

- transferring design to optimise use of material
- minimising filing and finishing requirements
- following design markings
- filing, emery finishing pattern/blank
- folding, bending, curving, dapping etc. as required
- achieving correct symmetry, angle, shape
- correctly aligning joins
- removing excess materials by filing, emery etc.
- undertaking re-forming adjustments if necessary to achieve specifications
- removing scratches, scribe marks and other markings by file, emery etc. to a fine emery finish
- polishing item according to standard operating procedure

Required knowledge

Look for evidence that confirms knowledge of:

- metal types, applications and properties
- jewellery items and components
- methods and tools for transferring designs
- selection of blades, drills and files
- techniques and methods for forming and finishing components/single piece
- tools and equipment for forming and finishing
- polishing techniques
- safe operation of equipment
- use and application of personal protective equipment
- safe work practices and procedures
- relevant hazards and control measures related to the competency

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 construct jewellery components or single-piece items of basic design. 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. Where assessment occurs off the job, i.e. the candidate is not in productive work, an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies 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 constructing jewellery components or items 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.
Guidance information for	

EVIDENCE GUIDE**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.

Components/items	Components or single-piece items of basic design
Design requirements	Instructions from supervisor/management, job packet
Forming methods	Cutting, folding, bending, curving, dapping
Joining methods	Primarily by brazing/silver soldering but may include other methods such as riveting
Finishing processes	Filing, emery finishing, basic polishing
Transfer design	Transfer direct to work piece using permanent pen, scribe, freehand and/or by compass, dividers, chinagraph pencil, carbon paper tracing or drawn/copied to template and adhered to work piece
Tools and equipment	Compass, dividers, rules, squares, spring gauges, vernier calipers, piercing saw, files, drill press/pedestal drill, polishing equipment and compounds, ultrasonic cleaner

Unit Sector(s)**Unit sector**

Co-requisite units

Co-requisite units		

Competency field

Competency field	Jewellery and horological
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