



Australian Government

MEM19049 Develop and apply heraldic designs for hand engraving

Release: 1

MEM19049 Develop and apply heraldic designs for hand engraving

Modification History

Release 1. Supersedes and is equivalent to MEM19049A Develop and apply heraldic designs for hand engraving.

Application

This unit of competency defines the skills and knowledge required to engrave complex heraldic designs and layouts onto metal surfaces to meet client requirements. Engraving includes heraldic designs, such as College of Arms, crests, coats of arms and flag designs.

This unit applies to individuals involved in jewellery design or manufacture in a small or large-scale production context. They use and adapt 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: 2

Pre-requisite Unit

MEM13015 Work safely and effectively in manufacturing and engineering

MEM16006 Organise and communicate information

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) 1.2 Comply with work health and safety (WHS) requirements at all times 1.3 Use personal protective equipment (PPE) in accordance with SOPs

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.4 Determine client requirements for application of the heraldic design onto the metal surface
2. Develop heraldic designs	2.1 Plan the layout for the heraldic design according to predetermined dimensions and client requirements 2.2 Use computer-based tools to explore and develop heraldic designs for hand engraving
3. Mark out layout of heraldic designs to be engraved	3.1 Identify and use techniques to reduce or enlarge designs to predetermined dimensions according to client requirements 3.2 Mark out heraldic layouts on metal surfaces to be engraved using predetermined reference or datum points
4. Perform hand engraving of heraldic designs	4.1 Perform heraldic crest hand engraving to predetermined stipulations and dimensions 4.2 Perform work in a manner that minimises waste and complies with environmental requirements
5. Finish work	5.1 Check jewellery piece against quality and client requirements and rectify any deficiencies 5.2 Clean item and prepare for presentation to client 5.3 Clean up and maintain production environment and equipment in accordance with SOPs

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.

Heraldic designs include	College of Arms as a repository of information for historical and
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one or more of the following:	- cultural sources - crests - coats of arms - flag designs - shields - helmets.
Tools include one or more of the following:	- gravers - scorpers.
Tool maintenance includes one or more of the following:	- graver shape - cutting angles - points - cutting edges - polished faces.
Metal surfaces include one or more of the following:	- gold - silver - platinum - alloys.
Computer-based tools include one or more of the following:	- computer-generated fonts - word processing applications - vector based and bitmap drawing applications - desktop publishing applications - printers.
Elements and principles of design include one or more of the following:	- line, direction, shape and size - texture, colour and value - harmony, contrast, dominance - repetition, gradation and radiation - unity, proportion, alternation and balance.
Environmental requirements include one or more of the following:	- liquid waste - solid waste - emissions (gas, fume, vapour, smoke, fugitive emissions or dust) - excessive noise - excessive energy and water use.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM19049A Develop and apply heraldic designs for hand engraving.

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 MEM19049 Develop and apply heraldic designs for hand engraving

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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 including those related to repair or restoration
- identifying the engraving sequence and using computer-based tools
- drawing decorative borders and other design work to required dimensions using datum lines or points representing fine line detail and shading
- applying block and script lettering and carving techniques to achieve patterns in relief or intaglio
- laying out and transferring heraldic designs onto metal surfaces on at least two occasions
- selecting and using applicable tools and engraving with appropriate spacing for decorative design work
- completing and presenting design and layout work that is clean, accurate and meets with client approval and commercial standards on at least two occasions
- machining, sharpening and maintaining tools 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)
- types of heraldic designs
- historic and cultural sources of heraldic designs
- design research techniques
- elements and principles of design as applied to applications of hand-engraved designs to a range of metal surfaces
- types, characteristics and responses of metals for engraving purposes
- engraving terminology
- methods used to determine customer requirements
- computer-based engraving aids

- sources of task-related information
- securing methods and limitations
- different gravers, scorpers and other tools, their maintenance and applications
- techniques for producing and maintaining cutting edges
- equipment used for maintaining gravers and tool maintenance
- required industry standards
- hand engraving techniques
- environmental considerations when engraving.
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Assessment Conditions

- Assessors must:
 - have vocational competency in developing and applying heraldic designs for hand engraving 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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