



Australian Government

Department of Education, Employment and Workplace Relations

MEM19049A Develop and apply heraldic designs for hand engraving

Release: 1

MEM19049A Develop and apply heraldic designs for hand engraving

Modification History

New unit

Unit Descriptor

This unit of competency covers the skills and knowledge required to engrave a variety of complex heraldic designs and layouts onto various metal surfaces.

Application of the Unit

This unit applies to engraving items, such as jewellery and metal objects, according to client requirements. Engraving includes heraldic designs, such as College of Arms, crests, coats of arms and flag designs.

Work includes use of engraving equipment and inspection of the work produced.

Band A
Unit Weight 2

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

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	Research heraldic designs and identify requirements for engraving	1.1	Research heraldic designs for hand engraving
		1.2	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 techniques to reduce or enlarge designs to predetermined dimensions according to client requirements
		3.2	Accurately mark out heraldic layouts on metal surfaces to be engraved using predetermined reference/datum points
4	Perform hand engraving of heraldic designs	4.1	Perform heraldic crest hand engraving to predetermined stipulations/dimensions
		4.2	Perform engraving of ornate style heraldic crests to a commercial industry standard
		4.3	Perform engraving of heraldic shields
		4.4	Perform engraving of heraldic helmets
		4.5	Perform work in a manner that minimises waste and

complies with environmental requirements

- 4.6 Observe occupational health and safety (OHS) requirements and safely operate all workshop equipment used

- 5 Finish work
- 5.1 Check engraving meets client requirements and quality standards
- 5.2 Clean item and prepare for presentation to client
- 5.3 Clean up work area

Required Skills and Knowledge

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

Required skills

Required skills include:

- reading, interpreting and following information on written job instructions, specifications, standard operating procedures, charts, lists, drawings and other applicable reference documents
- interpreting client requirements
- identifying the engraving sequence
- using drawing tools
- using datum lines/points
- drawing decorative borders and other design work to required dimensions
- applying block/script lettering and carving techniques to achieve patterns in relief or intaglio
- skilfully laying out and transferring heraldic designs onto metal surfaces
- selecting and using gravers, scorpers and other applicable tools
- controlling engraving tools
- machining and sharpening graver shape and cutting angles
- handling and securing work pieces
- maintaining points/cutting edges/polished faces
- completing fine engraving work by hand

Required knowledge

Required knowledge includes:

- 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
- characteristics and responses of metals for engraving purposes
- engraving terminology
- sources of task-related information
- securing methods and limitations
- different gravers, scorpers and other tools and their applications
- techniques for producing and maintaining cutting edges
- equipment used for maintaining gravers

- required industry standards
- tool maintenance
- hand engraving techniques
- hazards and control measures, including housekeeping
- use and application of personal protective equipment
- safe work practices and procedures

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 engrave a variety of heraldic designs on a range of metal surfaces.
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 engraving equipment and processes • source heraldic designs to meet customer requirements • appropriately position and transfer heraldic design onto the object to be engraved • represent fine line detail and shading • design work that meets with client approval and is consistent with commercial standards.
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.
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.

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.

Heraldic designs	Heraldic designs may include: • College of Arms as a repository of information for historical and cultural sources • crests • coats of arms • flag designs
Metal surfaces	Metal surfaces may include, but are not limited to: • gold • silver • platinum • alloys
Computer-based tools	Computer-based tools may include, but are not limited to: • computer-generated fonts • word processing applications • vector based and bitmap drawing applications • desktop publishing applications • printers

Elements and principles of design	Elements and principles of design may include: • line and direction • shape and size • texture, colour and value • harmony • contrast • dominance • repetition • gradation and radiation • unity • proportion • alternation • balance
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

Unit Sector(s)

Jewellery

Custom Content Section

Not applicable.