



Australian Government

MSFGG4025 Apply innovation in contemporary designed glass

Release: 1

MSFGG4025 Apply innovation in contemporary designed glass

Modification History

Release 1. New unit.

Application

This unit describes the skills and knowledge required to use innovative techniques to design and fabricate designed glass works, including lead light and stained, kiln-formed and laminated glass. It involves research and analysis of innovative ideas about glass and experimentation, adaptation of traditional techniques and subsequent refinement and application of new ideas and techniques. 'Designs' may include drawings, models, specifications, production plans and design rationales.

This unit applies to experienced glass industry workers working with designed glass who interpret and use advanced technical information to develop solutions to potentially complex designed glass requirements. They commonly work independently and typically solve complex problems that require theoretical knowledge and experience about the specification, manufacture and installation of a wide range of designed glass installations.

At the time of this unit's release, the work described in this unit does not require licensing or certification, but state or territory authorities should be consulted to determine the current status. Workers on construction sites are required by law to complete induction training. They must also comply with relevant legislation, Australian Standards, codes and manufacturers' installation instructions.

Competency Field

Designed glazing

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify the potential or need for innovation	1.1 Analyse design and production requirements from job instructions to identify opportunities to innovate in the use of designed glass 1.2 Identify and access sources of relevant information about historical, cultural and other factors relevant for innovation to meet design and production requirements
2. Conduct research and experimentation	2.1 Identify suitable research and experimentation techniques and procedures and obtain approval from relevant personnel to use them 2.2 Identify and engage with specialists who could assist the realisation

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	of innovative techniques and designs 2.3 Research, adapt and use relevant ideas and approaches from other practitioners with consideration of intellectual property, moral rights and copyright 2.4 Select, adapt or introduce new materials, tools, equipment or technologies to enable experimentation 2.5 Experiment to establish the best ways to achieve innovative responses to job requirements, considering feasibility 2.6 Consult with colleagues about the results of experimentation
3. Produce innovative designs	3.1 Prepare preliminary designs according to job instructions 3.2 Produce and evaluate samples to assess materials, construction methods, feasibility or cost 3.3 Prepare final designs according to job instructions 3.4 Identify and estimate materials, subcontracted services, direct and indirect costs, overheads and mark-ups for panel fabrication according to workplace procedures
4. Fabricate innovative pieces	4.1 Select and check all required tools and equipment are ready to use 4.2 Gather materials required to fabricate the pieces, and check they meet quality requirements 4.3 Identify hazards and hazard controls and check the hazard controls are in place and operating 4.4 Lay out, measure, cut and assemble materials and complete fabricating innovative pieces according to designs and specifications 4.5 Clean up the work area, identify items for recycling and dispose of waste 4.6 Identify, tag and report any damage to equipment and tools 4.7 Check, clean and do routine maintenance on equipment and tools and store them and unused materials

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

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

Unit Mapping Information

No equivalent unit.

Links

Companion Volume implementation guides are found in VETNet –

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0601ab95-583a-4e93-b2d4-cfb27b03ed73>

Assessment Requirements for MSFGG4025 Apply innovation in contemporary designed glass

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Performance Evidence

There must be evidence the candidate has completed the tasks in the elements and performance criteria of this unit of competency and has:

- produced a portfolio of four designs, with two to include cost estimates for fabrication
- fabricated four pieces from the portfolio:
 - two leadlight and/or stained glass
 - two individually designed glass installations.

Knowledge Evidence

There must be evidence the candidate has knowledge of:

- state or territory work health and safety legislation, regulations, standards and codes of practice relevant to the full range of processes for designed glass experimentation, fabrication and installation
- contemporary designed glass construction terminology and techniques
- types of glass and other materials used in the designed glass industry, their characteristics, properties, uses and limitations
- innovative and experimental designed glass production techniques in 2D and 3D formats
- colour theory, line, dimension, chiaroscuro and depth and their application to designed glass
- glass painting and firing techniques
- use and properties of a range of paints and materials for glass work
- testing finished and unfinished materials used in designed glass
- workplace policies and procedures relevant to their job role and responsibilities including for:
 - innovating with designed glass
 - communication and reporting
 - environmental protection and sustainability, including maximising resource utilisation and minimising waste
 - quality indicators for completed work and process improvements
 - work health and safety, including the use of personal protective equipment
 - work planning
- the most common issues that can arise when experimenting with, fabricating and installing designed glass and how to avoid and respond to them.

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Assessment Conditions

Skills must have been demonstrated in the workplace or in a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources, including:
 - materials, equipment and tools required for the activities set out in the elements and performance criteria, including those to control hazards
 - job instructions and workplace procedures.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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