



**Australian Government**

# **Assessment Requirements for MEM30029 Use workshop equipment and processes to complete an engineering project**

**Release: 1**

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## **Modification History**

Release 1. Supersedes and is equivalent to MEM30029A Use workshop equipment and processes to complete an engineering project.

## **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:

- using workshop equipment and processes to complete an engineering project on at least two occasions
- preparing a basic work plan
- identifying and preparing selected materials and equipment
- applying manual workshop techniques using hand and power tools
- using common engineering workshop equipment and machinery to complete individual parts of a project on at least two occasions
- assembling component parts using joining techniques
- following WHS procedures and hazard control strategies at all times.

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 working practices and procedures including workshop and machine safety, hazard identification and hazard control
- task planning and sequencing of operations
- elements of engineering projects
- technical work activities
- marking out tools, techniques and media
- common measurement tools and techniques
- allowances and tolerances
- material preparation
- common engineering materials
- common engineering tools and equipment including:
  - hand tools and their applications
  - fixed and portable power tools and their applications

- machines
- fabrication and welding machines
- fixing tools and accessories
- common workshop techniques including:
  - hand and machine cutting
  - drilling
  - tapping
  - grinding
  - machining
  - welding
  - bending and shaping
  - assembly and fixing
- work holding methods
- basic tooling identification
- speeds and feeds
- machine set-up and operation
- cutting fluids and basic operational maintenance of machines.

## Assessment Conditions

- Assessors must:
  - have vocational competency in using workshop equipment and processes to complete an engineering project 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 that 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.

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

