Australian Government

MEM20413 Certificate II in Engineering Pathways

Release 1

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

MEM20413 Certificate II in Engineering Pathways

Modification History

New qualification - Release 1

Description

This qualification applies to a learning and assessment environment where access to structured on-the-job learning in a workplace may not be available. This qualification is only for delivery in learning institutions.

The qualification is intended for people interested in exposure to an engineering or related working environment with a view to entering into employment in that area. This qualification will equip graduates with knowledge and skills which will enhance their prospects of employment in an engineering or related working environment.

Application

The learning program should develop trade-like skills but not attempt to develop trade-level skills. As an example, the outcome level of welding skills from this qualification is not about learning trade-level welding theory and practice; it is about being introduced to welding, how it can be used to join metal and having the opportunity to weld some metal together. Similarly with machining, the outcome should be something produced on a lathe etc., not the theory and practice of machining. The focus should be on using engineering tools and equipment to produce or modify objects. This needs be done in a safe manner for each learner and those around them.

Delivery

Registered Training Organisations (RTOs) offering this qualification will need to have access to basic engineering equipment and facilities, as well as sufficient open plan workshop facilities where long-term projects, perhaps spanning the duration of the learning, can be completed. The teachers/trainers must be experienced with the knowledge and trade skills to successfully facilitate and motivate skills development in the learners. Trainers and assessors must meet the NVR/AQTF trainer and assessor requirements for training and assessment, vocational competency and professional development.

The learning program should be centred around the major project.

MSAPCI101A Adapt to work in industry is a unit of competency that provides the opportunity for work placement.

Pathways Information

Pathways into the qualification

This qualification will be typically accessed by direct entry.

Pathways from the qualification

This qualification delivers broad-based underpinning skills and knowledge in a range of engineering and manufacturing tasks which will enhance the graduates' entry-level employment prospects for apprenticeships, traineeships or general employment in an engineering-related workplace.

Achievement of competence in units *MEM13014A Apply principles of occupational health and safety in a work environment*, *MSAPMSUP106A Work in a team*, *MEM16006A Organise and communicate information*, *MEM16008A Interact with computing technology*, *MSAENV272B Participate in environmentally sustainable work practices*, *MEM18001C Use hand tools* and *MEM18002B Use power tools/hand held operations* will provide credit towards a range of manufacturing and engineering trade and production qualifications.

Achievement of competence in all of the other units will provide advanced progress towards reaching competence in units contained in other metal and engineering qualifications.

Licensing/Regulatory Information

There are no specific licences that relate to this qualification.

Entry Requirements

There are no entry requirements for this qualification.

Employability Skills Summary

Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	• Read and interpret routine information on written job instructions and standard operating procedures including simple drawings • Follow verbal instructions • Orally report routine information • Use basic numeracy skills for undertaking measurements
Teamwork	• Work alone or as part of a team • Identify work roles, communicate and cooperate with others
Problem-solving	• Check material/product for conformance to specification • Identify waste and correct procedures for disposal • Identify routine problems/faults in machine/process/equipment operations and act/report as required
Initiative and enterprise	• Be capable of applying skills and knowledge to specified situations and contexts • Identify actual and foreseeable workplace hazards/problems during course of work • Minimise wasteful use of resources including materials and services in own work
Planning and organising	• Select, prepare and lay out or assemble materials and equipment correctly • Conduct pre-start checks on machinery/equipment • Plan steps required to complete routine task • Identify sequence of activities/operations
Self-management	• Adhere to all safety requirements • Perform work in accordance with job instructions and work procedures
Learning	• Clarify tasks and required outcomes with appropriate personnel
Technology	• Use dedicated tools, equipment and machines

Packaging Rules

The minimum requirements for achievement of the Certificate II in Engineering Pathways are completion of a minimum of twelve (12) units of competency as described below:

- all of the core units of competency listed below
- a **minimum of seven (7)** Group A electives
- a **maximum of one (1)** Group B elective.

Core units

- select all of the units from this list

Unit code	Unit title
MEM13014A	Apply principles of occupational health and safety in the work environment
MEMPE005A	Develop a career plan for the engineering and manufacturing industry
MEMPE006A	Undertake a basic engineering project
MSAENV272B	Participate in environmentally sustainable work practices

Group A electives

Unit code	Unit title
MEM16006A	Organise and communicate information
MEM16008A	Interact with computing technology
MEM18001C	Use hand tools
MEM18002B	Use power tools/hand held operations
MEMPE001A	Use engineering workshop machines
MEMPE002A	Use electric welding machines
MEMPE003A	Use oxy-acetylene and soldering equipment
MEMPE004A	Use fabrication equipment
MEMPE007A	Pull apart and re-assemble engineering mechanisms

Group B Electives

Unit code	Unit title
MSAPCI101A	Adapt to work in industry
MSAPMSUP106A	Work in a team

Custom Content Section

Not applicable.