



Australian Government

Department of Education, Employment and Workplace Relations

MEM10105 Certificate I in Engineering

Release: 1

MEM10105 Certificate I in Engineering

Modification History

Not Applicable

Description

The minimum requirements for achievement of the Certificate I in Engineering are:

- completion of all of the core units of competency listed below, and
- completion of elective units listed below to the value of at least 24 points.

Points associated with prerequisites count towards the total (refer to units and prerequisites listing in Appendix 2, Volume 1).

Appropriate elective units to the value of 5 points may be chosen from other endorsed Training Packages and accredited courses where those units are available for inclusion at Certificate I. Note that the elective units listed below include all of the units that are approved for selection from the MEM Training Package for use qualification. This meets the NQC requirement that one sixth of the total units must be able to be selected from other qualifications in the same Training Package.

Registered Training Organisations must seek a determination from Manufacturing Skills Australia in respect of the allocation of points values for units of competency drawn from other Training Packages or accredited courses.

Pathways Information

Not Applicable

Licensing/Regulatory Information

Not Applicable

Entry Requirements

Not Applicable

Employability Skills Summary

EMPLOYABILITY SKILLS QUALIFICATION SUMMARY	
Employability Skill	Industry/enterprise requirements for this qualification include:
Communication	<ul style="list-style-type: none"> • Read and interpret routine information on written job instructions and standard operating procedures. May include simple drawings • Follow verbal instructions • Enter routine and familiar information onto proforma and standard workplace forms • Orally report routine information • Use basic numeracy skills for undertaking comparison measurements
Teamwork	<ul style="list-style-type: none"> • Work alone or as part of a team • Identify work roles, communicate and cooperate with others
Problem-solving	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Adhere to all safety requirements • Perform work in accordance with job instructions and work procedures
Learning	<ul style="list-style-type: none"> • Clarify tasks and required outcomes with appropriate personnel
Technology	<ul style="list-style-type: none"> • Use dedicated tools, equipment and machines

Packaging Rules

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
MEM14004A	Plan to undertake a routine task
MEM15024A	Apply quality procedures
MEM16007A	Work with others in a manufacturing, engineering or related environment

Elective units

- select units from this list to the value of at least 24 points, including any prerequisites.

Unit code	Unit title	P
MEM03001B	Perform manual production assembly	4
MEM03002B	Perform precision assembly	4
MEM03003B	Perform sheet and plate assembly	4
MEM03004B	Perform electronic/electrical assembly (production)	8
MEM03006B	Set assembly stations	2
MEM04004B	Prepare and mix sand for metal moulding	4
MEM04008B	Fettle and trim metal castings/forgings	4
MEM04018B	Perform general woodworking machine operations	4
MEM05001B	Perform manual soldering/desoldering - electrical/electronic components	4
MEM05003B	Perform soft soldering	2
MEM05004C	Perform routine oxy acetylene welding	2
MEM05005B	Carry out mechanical cutting	2

Unit code	Unit title	P
MEM05006B	Perform brazing and/or silver soldering	2
MEM05007C	Perform manual heating and thermal cutting	2
MEM05012C	Perform routine manual metal arc welding	2
MEM05013C	Perform manual production welding	2
MEM06001B	Perform hand forging	4
MEM06007B	Perform basic incidental heat/quenching, tempering and annealing	2
MEM07001B	Perform operational maintenance of machines/equipment	2
MEM07003B	Perform machine setting (routine)	4
MEM07024B	Operate and monitor machine/process	4
MEM07028B	Operate computer controlled machines/processes	2
MEM07029B	Perform routine sharpening/maintenance of production tools and cutters	4
MEM07030C	Perform metal spinning lathe operations (basic)	8
MEM07032B	Use workshop machines for basic operations	2
MEM08001B	Perform wire, jig and barrel load/unload work	4
MEM08002C	Pre-treat work for subsequent surface coating	4
MEM08004B	Finish work using wet, dry and vapour deposition methods	4
MEM08009C	Make up solutions	2
MEM08010B	Manually finish/polish materials	6
MEM08011B	Prepare surfaces using solvents and/or mechanical means	2
MEM08012B	Prepare surfaces by abrasive blasting (basic)	4
MEM08014B	Apply protective coatings (basic)	4
MEM08016B	Control blast coating by-products, materials and emissions	1
MEM11005B	Pick and process order	4
MEM11006B	Perform production packaging	2

Unit code	Unit title	P
MEM11007B	Administer inventory procedures	4
MEM11008B	Package materials (stores and warehouse)	2
MEM11009B	Handle/move bulk fluids/gases	4
MEM11011B	Undertake manual handling	2
MEM11013B	Undertake warehouse receipt process	4
MEM11016B	Order materials	2
MEM12001B	Use comparison and basic measuring devices	2
MEM12002B	Perform electrical/electronic measurement	2
MEM12023A	Perform engineering measurements	5
MEM12024A	Perform computations	3
MEM13001B	Perform emergency first aid	1
MEM13002B	Undertake occupational health and safety activities in the workplace	3
MEM13003B	Work safely with industrial chemicals and materials	2
MEM13004B	Work safely with molten metals/glass	2
MEM14005A	Plan a complete activity	4
MEM15001B	Perform basic statistical quality control	2
MEM15002A	Apply quality systems	2
MEM15003B	Use improvement processes in team activities	4
MEM16004B	Perform internal/external customer service	2
MEM16005A	Operate as a team member to conduct manufacturing, engineering or related activities	2
MEM16006A	Organise and communicate information	2
MEM16008A	Interact with computing technology	2
MEM17003A	Assist in the provision of on the job training	2

Unit code	Unit title	P
MEM18001C	Use hand tools	2
MEM18002B	Use power tools/hand held operations	2
MEM18013B	Perform gland packing	2
MEM18038B	Maintain wheels and tyres	2
MEM19001B	Perform jewellery metal casting	6
MEM19002B	Prepare jewellery illustrations	4
MEM19003B	Handle gem materials	2
MEM19006B	Replace watch batteries	1
MEM19009B	Perform investment procedures for lost wax casting process	1
MEM19010B	Produce rubber moulds for lost wax casting process	2
MEM19011B	Perform wax injection of moulds for lost wax casting process	2
MEM19014B	Perform hand engraving	4
MEM19015B	Perform jewellery enamelling	4
MEM19016B	Construct jewellery components	4
MEM19017B	Fabricate jewellery items	6
MEM20001A	Produce keys	4
MEM20002A	Assemble and test lock mechanisms	6
MEM20003A	Install and upgrade locks and hardware	4
MEM25001B	Apply fibre-reinforced materials	2
MEM25002B	Form and integrate fibre-reinforced structures	4
MEM25004B	Fair and shape surfaces	2
MEM25006B	Undertake marine sheathing operations	2
MEM25007B	Maintain marine vessel surfaces	4
MEM25014B	Perform marine slipping operations	2

Unit code	Unit title	P
MEM50002B	Work safely on marine craft	1
MEM50003B	Follow work procedures to maintain the marine environment	1
MEM50004B	Maintain quality of environment by following marina codes	1
MEM50009B	Safely operate a mechanically powered recreational boat	2