



Australian Government

MEM20219 Certificate II in Engineering - Production Technology

Release 2

MEM20219 Certificate II in Engineering - Production Technology

Modification History

Release 2. Elective units updated. Supersedes and is equivalent to MEM20219 Certificate II in Engineering - Production Technology (Release 1).

Release 1. Supersedes and is equivalent to MEM20205 Certificate II in Engineering – Production Technology

Qualification Description

This qualification defines the skills and knowledge required of an engineering/manufacturing employee within metal, engineering, manufacturing and associated industries.

The skills associated with this qualification are intended to apply to a wide range of engineering/manufacturing work, including production, distribution, stores and warehousing. It provides the skills and knowledge for a person to be responsible for the quality of their own work, work from complex instructions and procedures, coordinate work in a team environment or work individually under general supervision and assist in the provision of on-the-job training of other workers.

This qualification is specifically designed to cover the skills and knowledge required of workers employed as Engineering/Manufacturing Employees - Level IV as defined in the Manufacturing and Associated Industries and Occupations Award.

Assessment of some units of competency must, where indicated, include evidence of the candidate's performance in a functioning workplace where there is a sufficient range of appropriate tasks and/or materials to cover the scope of application of those units. All outcomes must reflect the standard of performance required of the work associated with the Unit/s.

This qualification is not suited and should not be used for people who are not employed in an engineering production or manufacturing environment, nor should it be used for school students unless they are formally engaged in a traineeship in accordance with the Australian Apprenticeships policy.

No licensing, legislative or certification requirements apply to this qualification at the time of publication. However, in some jurisdictions units in this qualification may relate to licensing or regulatory requirements. Local regulations should be checked.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To be awarded the MEM20219 Certificate II in Engineering – Production Technology units of competency to the value of 64 points must be achieved, chosen as outlined below:

- core units of competency listed below (totalling 18 points)

- elective units of competency to the value of 46 points from Group A.

Appropriate elective units to the value of 11 points may be chosen from this Training Package, other endorsed Training Packages and accredited courses where those units are available for inclusion at Certificate II. Only select units that would be suitable for occupational outcomes in an engineering/manufacturing environment.

Registered Training Organisations (RTOs) must seek a determination from the industry parties in respect of the allocation of points values for units of competency drawn from other Training Packages or accredited courses. Determination of points requests are to be submitted to the industry parties through Innovation and Business Skills Australia (IBSA) Manufacturing. Refer to the MEM Companion Volume Implementation Guide for information on determination of unit points values.

Prerequisites

Points associated with prerequisites count towards the total. Units with prerequisite requirements are marked with an asterisk (refer to the individual units for details). All prerequisites are included in the units listed.

Core units of competency

Unit code	Unit title	P	Pre req
MEM11011	Undertake manual handling	2	*
MEM12023	Perform engineering measurements	5	*
MEM13015	Work safely and effectively in manufacturing and engineering	2	
MEM16006	Organise and communicate information	2	*
MEM17003	Assist in the provision of on-the-job training	2	*
MEM18001	Use hand tools	2	*
MSMENV272	Participate in environmentally sustainable work practices	3	

Elective units of competency

Group A

Unit code	Unit title	P	Pre req
MEM03001	Perform manual production assembly	4	*
MEM03002	Perform precision assembly	4	*

Unit code	Unit title	P	Pre req
MEM03003	Perform sheet and plate assembly	4	*
MEM03004	Perform electronic/electrical assembly (production)	8	*
MEM03005	Rework and repair (electrical/electronic production)	8	*
MEM03006	Set assembly stations	2	*
MEM04001	Operate melting furnaces	4	*
MEM04002	Perform gravity die casting	2	*
MEM04003	Operate pressure die casting machine	4	*
MEM04004	Prepare and mix sand for metal moulding	4	*
MEM04006	Operate sand moulding and core making machines	8	*
MEM04007	Pour molten metal	4	*
MEM04008	Fettle and trim metal castings/forgings	4	*
MEM04018	Perform general woodworking machine operations	4	*
MEM04019	Perform refractory installation and repair	4	*
MEM05001	Perform manual soldering/desoldering - electrical/electronic components	4	*
MEM05002	Perform high reliability soldering and desoldering	4	*
MEM05003	Perform soft soldering	2	*
MEM05004	Perform routine oxy fuel gas welding	2	*
MEM05005	Carry out mechanical cutting	2	*
MEM05006	Perform brazing and/or silver soldering	2	*
MEM05007	Perform manual heating and thermal cutting	2	*
MEM05009	Perform automated thermal cutting	2	*
MEM05012	Perform routine manual metal arc welding	2	*
MEM05013	Perform manual production welding	2	*

Unit code	Unit title	P	Pre req
MEM05014	Monitor quality of production welding/fabrications	2	*
MEM05027	Perform aluminothermic welding	2	*
MEM05049	Perform routine gas tungsten arc welding	2	*
MEM05050	Perform routine gas metal arc welding	2	*
MEM05057	Perform routine submerged arc welding	2	*
MEM06001	Perform hand forging	4	*
MEM06007	Perform basic incidental heat/quenching, tempering and annealing	2	*
MEM07001	Perform operational maintenance of machines/equipment	2	*
MEM07003	Perform routine machine setting	4	*
MEM07004	Perform complex machine setting	8	*
MEM07015	Set computer controlled machines and processes	2	*
MEM07024	Operate and monitor machine and process	4	*
MEM07028	Operate computer controlled machines and processes	2	*
MEM07029	Perform routine sharpening and maintenance of production tools and cutters	4	*
MEM07030	Perform basic metal spinning lathe operations	8	*
MEM07032	Use workshop machines for basic operations	2	*
MEM07033	Operate and monitor basic boiler	6	*
MEM07041	Perform production machining	8	*
MEM08001	Perform wire, jig and barrel load/unload work	4	*
MEM08002	Pre-treat work for subsequent surface coating	4	*
MEM08003	Perform electroplating operations	6	*
MEM08004	Finish work using wet, dry and vapour deposition methods	4	*
MEM08005	Prepare and produce specialised coatings	4	*

Unit code	Unit title	P	Pre req
MEM08006	Produce clear and/or coloured and/or sealed anodised films on aluminium	2	*
MEM08007	Control surface finish production and finished product quality	4	*
MEM08008	Operate and control surface finishing waste treatment process	3	*
MEM08009	Make up solutions	2	*
MEM08010	Manually finish/polish materials	6	*
MEM08011	Prepare surfaces using solvents and/or mechanical means	2	*
MEM08012	Prepare surfaces by abrasive blasting (basic)	4	*
MEM08013	Prepare surfaces by abrasive blasting (advanced)	4	*
MEM08014	Apply protective coatings (basic)	4	*
MEM08015	Apply protective coatings (advanced)	4	*
MEM08016	Control blast coating by-products, materials and emissions	1	*
MEM08018	Electroplate engineering coatings	6	*
MEM08019	Electroplate protective finishes	6	*
MEM09002	Interpret technical drawing	4	*
MEM10002	Terminate and connect electrical wiring	3	*
MEM10013	Install split air conditioning systems and associated pipework	6	*
MEM11001	Erect/dismantle scaffolding and equipment	4	*
MEM11002	Erect/dismantle intermediate scaffolding and equipment	4	*
MEM11004	Undertake dogging	4	*
MEM11005	Pick and process order	4	*
MEM11006	Perform production packaging	2	*
MEM11007	Administer inventory procedures	4	*
MEM11008	Package materials (stores and warehouse)	2	*

Unit code	Unit title	P	Pre req
MEM11009	Handle/move bulk fluids/gases	4	*
MEM11010	Operate mobile load shifting equipment	4	*
MEM11013	Undertake warehouse receipt process	4	*
MEM11014	Undertake warehouse dispatch process	4	*
MEM11016	Order materials	2	*
MEM11019	Undertake tool store procedures	4	*
MEM11021	Perform advanced operation of load shifting equipment	2	*
MEM11022	Operate fixed/moveable load shifting equipment	4	*
MEM11023	Operate a bridge and gantry crane	4	*
MEM11024	Undertake basic rigging	4	*
MEM11025	Operate a non-slewing mobile crane of greater than three tonnes capacity	4	*
MEM12001	Use comparison and basic measuring devices	2	*
MEM12002	Perform electrical/electronic measurement	2	*
MEM12019	Measure components using coordinate measuring machines	4	*
MEM12024	Perform computations	3	*
MEM13001	Perform emergency first aid	1	*
MEM13003	Work safely with industrial chemicals and materials	2	*
MEM13004	Work safely with molten metals/glass	2	*
MEM13007	Maintain water treatment systems for cooling towers	2	*
MEM13018	Work safely with ionizing radiation	4	
MEM13019	Undertake work health and safety activities in the workplace	3	
MEM14006	Plan work activities	4	*
MEM15001	Perform basic statistical quality control	2	*

Unit code	Unit title	P	Pre req
MEM15003	Use improvement processes in team activities	4	*
MEM15004	Perform inspection	2	*
MEM16004	Perform internal/external customer service	2	*
MEM16005	Operate as a team member to conduct manufacturing, engineering or related activities	2	*
MEM16008	Interact with computing technology	2	*
MEM18002	Use power tools/hand held operations	2	*
MEM18055	Dismantle, replace and assemble engineering components	3	*
MEM18083	Handle fluorocarbon refrigerants according to regulations	1	*
MEM18084	Commission and decommission split air conditioning systems	4	*
MEM18086	Test, recover, evacuate and charge refrigeration systems	4	*
MEM18098	Prepare to perform work associated with fuel system installation and servicing	2	*
MEM27029	Maintain wheels and tyres	2	*
MEM27032	Service combustion engines	2	*
CPCCLDG3001	Licence to perform dogging	0	
CPCCLRG3001	Licence to perform rigging basic level	0	*
CPCCLSF2001	Licence to erect, alter and dismantle scaffolding basic level	0	
CPCCLSF3001	Licence to erect, alter and dismantle scaffolding intermediate level	0	*
TLILIC0003	Licence to operate a forklift truck	0	
TLILIC0004	Licence to operate an order picking forklift truck	0	
TLILIC0016	Licence to operate a bridge and gantry crane	0	
TLILIC0040	Licence to operate a non-slewing mobile crane (greater than 3 tonnes capacity)	0	

Qualification Mapping Information

Release 2. Supersedes and is equivalent to MEM20219 Certificate II in Engineering - Production Technology (Release 1).

Release 1. Supersedes and is equivalent to MEM20205 Certificate II in Engineering – Production Technology

Links

Companion Volume implementation guides are found in VETNet -

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