



Australian Government

MEM31219 Certificate III in Engineering - Industrial Electrician

Release 2

MEM31219 Certificate III in Engineering - Industrial Electrician

Modification History

Release 2. Mandatory training contract pathway added.

Release 1. Supersedes and is equivalent to MEM31215 Certificate III in Engineering - Industrial Electrician. Updated unit codes.

Qualification Description

This qualification provides competencies in the ability to select, set up and install, test, fault-find, repair and maintain electrical systems and equipment in buildings and industrial environments, including oil/gas installations, mine sites, processing plants and the like. The qualification covers the Essential Performance Capabilities as required by electrical regulators and includes a capstone assessment.

This qualification must be undertaken through a Training Contract or through formal trade recognition assessment processes.

Persons engaged in training towards this qualification must provide evidence of workplace experience to assist assessment against the units of competency and for any license application.

This qualification is designed to provide an industry recognised skills profile related to working as an Engineering Tradesperson – Industrial Electrician.

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 materials to cover the scope of application of those units. All outcomes must reflect the standard of performance inherent in the job.

This qualification is designed to support an application in each state and territory for a license to practise as an electrician. Other supporting documentation may be required. Local regulations should be checked for details.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

To be awarded the MEM31219 Certificate III in Engineering – Industrial Electrician, units of competency to the value of 96 points must be achieved, chosen as outlined below:

- all core units of competency listed below (totalling 90 points) and
- elective units of competency to the value of 6 points, to bring the total value to 96 points.

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

Core units of competency

Select all of the units from this list

Unit code	Unit title	Points	*P
MEM10016	Terminate and test electrical wiring and accessories	4	*
MEM10018	Select cable types and sizes to suit loads and electrical installation environment	4	
MEM10019	Select circuit protection devices by type and rating, fit to switchboards and install earthing	2	*
MEM10020	Install low voltage cabling and fit-off accessories, appliances and equipment	4	*
MEM10021	Inspect, test and verify electrical installations	4	*
MEM10022	Commission and decommission high and low voltage equipment or installations	2	
MEM10023	Design and connect control switching of circuits for building services and industrial equipment	4	*
MEM10024	Install and troubleshoot luminaires and ancillary equipment	2	*
MEM10025	Undertake a capstone assessment	1	*
MEM12023	Perform engineering measurements	5	*
MEM12024	Perform computations	3	
MEM13015	Work safely and effectively in manufacturing and engineering	2	
MEM13017	Apply safety practices, procedures and compliance standards associated with licensed electrical work	2	*
MEM14006	Plan work activities	4	*
MEM16006	Organise and communicate information	2	*
MEM16008	Interact with computing technology	2	*
MEM17003	Assist in the provision of on-the-job-training	2	*
MEM18001	Use hand tools	2	*

MEM18100	Fault-find, test and rectify AC machines and circuits	4	*
MEM18102	Fault-find, test and rectify single and three-phase transformers	4	*
MEM18103	Fault-find, test and rectify electrical circuits and equipment	4	*
MEM18104	Dismantle, replace and assemble electrical components and equipment	3	*
MSMENV272	Participate in environmentally sustainable work practices	3	
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace	2	
UEENEEE104A	Solve problems in d.c. circuits	5	*
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	4	*
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	5	*
UEENEEG102A	Solve problems in low voltage a.c. circuits	5	*

Elective units of competency

Select units to the value of 4 points from the list below or from any MEM Certificate III qualification.

Unit code	Unit title	Points	P*
MEM05001	Perform manual soldering/desoldering - electrical/electronic components	4	*
MEM05012	Perform routine manual metal arc welding	2	*
MEM05050	Perform routine gas metal arc welding	2	*
MEM07032	Use workshop machines for basic operations	2	*
MEM13016	Work in hazardous areas	2	*
MEM18105	Disconnect and reconnect high voltage fixed wired equipment	3	*

MEM18106	Terminate communication and data cables	4	*
MEM18108	Troubleshoot analog and digital electronic equipment	4	*
MEM18109	Troubleshoot instrumentation systems and equipment	4	*

Qualification Mapping Information

Release 2. Supersedes and is equivalent to MEM31219 Certificate III in Engineering - Industrial Electrician (Release 1).

Release 1. Supersedes and is equivalent to MEM31215 Certificate III in Engineering - Industrial Electrician.

Links

The MEM Metal and Engineering Training Package Companion Volume Implementation Guide is available from VETNet -

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