



Australian Government

## **MEM30422 Certificate III in Engineering - Electronic Trade**

**Release 1**

## **MEM30422 Certificate III in Engineering - Electronic Trade**

### **Modification History**

Release 1. Supersedes but is not equivalent to MEM30405 Certificate III in Engineering - Electrical/Electronic Trade.

### **Qualification Description**

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

The skills associated with this qualification are intended to apply to a wide range of electronic work, including installing, maintaining and repairing electronic equipment and systems including telecommunication, radio and television, communication and information processing.

This qualification is designed to provide an industry recognised skills profile related to trade work as an electronics tradesperson. Skills development should be undertaken through an Australian Apprenticeship arrangement where the mix of on- and off-the-job training would be specified in the Training Plan associated with the Contract of Training between the employer and apprentice.

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.

In some jurisdictions, units in this qualification may relate to licensing or regulatory requirements. Licensing and regulatory information is included in the relevant units of competency.

No licensing, legislative or certification requirements apply to this qualification at the time of publication. Local regulations should be checked.

### **Entry Requirements**

There are no entry requirements for this qualification.

### **Packaging Rules**

To be awarded the MEM30422 Certificate III in Engineering - Electronic Trade units of competency to a minimum value of ninety-six (96) points must be achieved, chosen as outlined below:

- all core units of competency listed below (totalling thirty-three (33) points) and
- units to a minimum value of forty (40) points from Group A electives as described below and
- units to a maximum value of twenty-three (23) points may be taken from Group B electives to bring the total value to at least 96 points.

Group B elective units to the value of eight (8) points, that are relevant to work as an electronics tradesperson and do not duplicate skills and knowledge already available in units within this qualification, may be chosen from this Training Package, other endorsed Training Packages and accredited courses where those units are available for inclusion at Certificate III.

Registered Training Organisations (RTOs) must seek a determination from the industry parties in respect of the allocations of point 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 point values.

No other descriptor can be used.

#### 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	Prereq
MEM09002	Interpret technical drawing	4	*
MEM11011	Undertake manual handling	2	*
MEM12023	Perform engineering measurements	5	*
MEM12024	Perform computations	3	*
MEM13015	Work safely and effectively in manufacturing and engineering	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	*
MEM18002	Use power tools/hand held operations	2	*
MSMENV272	Participate in environmentally sustainable work practices	3	

## Elective units of competency

## Group A

<b>Unit code</b>	<b>Unit title</b>	<b>P</b>	<b>Prereq</b>
MEM03004	Perform electronic/electrical assembly (production)	8	*
MEM03005	Rework and repair (electrical/electronic production)	8	*
MEM05001	Perform manual soldering/desoldering – electrical/electronic components	4	*
MEM05005	Carry out mechanical cutting	2	*
MEM05006	Perform brazing and/or silver soldering	2	*
MEM05007	Perform manual heating and thermal cutting	2	*
MEM07001	Perform operational maintenance of machines/equipment	2	*
MEM07032	Use workshop machines for basic operations	2	*
MEM10002	Terminate and connect electrical wiring	3	*
MEM10004	Enter and change programmable controller operational parameters	2	*
MEM10011	Terminate and connect specialist cables	3	*
MEM12002	Perform electrical/electronic measurement	2	*
MEM12004	Perform precision electrical/electronic measurement	4	*
MEM18045	Fault find and repair electrical equipment/components up to 250 volts single phase supply	4	*
MEM18055	Dismantle, replace and assemble engineering components	3	*
MEM18057	Maintain/service analog/digital electronic equipment	6	*
MEM18063	Terminate signal and data cables	4	*

## Group B

<b>Unit code</b>	<b>Unit title</b>	<b>P</b>	<b>Prereq</b>
MEM05002	Perform high reliability soldering and desoldering	4	*
MEM05012	Perform routine manual metal arc welding	2	*

Unit code	Unit title	P	Prereq
MEM07024	Operate and monitor machine and process	4	*
MEM08011	Prepare surfaces using solvents and/or mechanical means	2	*
MEM08012	Prepare surfaces by abrasive blasting (basic)	4	*
MEM08016	Control blast coating by-products, materials and emissions	1	*
MEM09003	Prepare basic engineering drawing	8	*
MEM09004	Perform electrical or electronic detail drafting	8	*
MEM09011	Apply basic engineering design concepts	6	*
MEM10003	Install and test electrical wiring and circuits up to 1000 volts a.c. and 1500 volts d.c.	12	*
MEM10005	Commission programmable controller programs	4	*
MEM11005	Pick and process order	4	*
MEM11010	Operate mobile load shifting equipment	4	*
MEM11016	Order materials	2	*
MEM11022	Operate fixed/moveable load shifting equipment	4	*
MEM11023	Operate a bridge and gantry crane	4	*
MEM11025	Operate a non-slewing mobile crane of greater than three tonnes capacity	4	*
MEM12004	Perform precision electrical/electronic measurement	4	*
MEM13001	Perform emergency first aid	1	*
MEM13003	Work safely with industrial chemicals and materials	2	*
MEM13019	Undertake work health and safety activities in the workplace	3	
MEM15001	Perform basic statistical quality control	2	*
MEM15003	Use improvement processes in team activities	4	*
MEM15004	Perform inspection	2	*
MEM16004	Perform internal/external customer service	2	*

Unit code	Unit title	P	Prereq
MEM16005	Operate as a team member to conduct manufacturing, engineering or related activities	2	*
MEM16013	Operate in a self-directed team	2	*
MEM18011	Shut down and isolate machines/equipment	2	*
MEM18048	Fault find and repair/rectify basic electrical circuits	12	*
MEM18051	Fault find and repair/rectify complex electrical circuits	6	*
MEM18057	Maintain/service analog/digital electronic equipment	6	*
MEM18063	Terminate signal and data cables	4	*
MEM27006	Diagnose and rectify batteries, low voltage sensors and circuits	8	*
MEM27016	Diagnose and maintain electronic controlling systems on mobile and stationary plant	4	*
MEM27023	Diagnose and rectify fieldbus circuits in mobile and stationary plant and equipment	4	*

## Qualification Mapping Information

Release 1. Supersedes but is not equivalent to MEM30405 Certificate III in Engineering - Electrical/Electronic Trade.

## Links

Companion Volume implementation guides are found in VETNet - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>