



Metal and Engineering and Electrotechnology Training Package Qualification Packaging based on Unit Resources Available from LRES Training Management

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Complete Qualifications



UEE30911 - Certificate III in Electronics and Communications (Release 5)

Packaging Rules

Completion requirements

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

- All the Core competency standard units, defined in the Core Competency Standard Units table below and
- A combination of Elective competency standard units to achieve a total weighting of 380 points in accordance with the Elective Competency Standard Units table below.

Core Competency Standard Units		Weighting Points	
	y standard units to be achieved		
UEENEEC021B	Participate in electronics and communications w competency development activities	ork and	60
UEENEEE101A	Apply Occupational Health and Safety regulatio and practices in the workplace	ns, codes	20
UEENEEE102A	Fabricate, assemble and dismantle utilities indus	try	40
UEENEEE104A	Solve problems in d.c. circuits		80
UEENEEE137A	Document and apply measures to control OHS associated with electrotechnology work	risks	20
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components		40
UEENEEH111A	Troubleshoot single phase input d.c. power sup	plies	40
UEENEEH112A	Troubleshoot digital sub-systems		80
UEENEEH113A	Troubleshoot amplifiers in an electronic apparat	us	80
UEENEEH114A	Troubleshoot resonance circuits in an electronic	apparatus	80
UEENEEH138A	Fault find and repair complex power supplies		40
UEENEEH139A	Troubleshoot basic amplifier circuits		40
UEENEEH146A	H146A Solve fundamental electronic communications system problems		40
UEENEEK142A Apply environmentally and sustainable procedures in the energy sector		res in the	20
Total points in core		680	
Elective Competency Standard Units Complete Elective units to achieve a total of weighting of 380 points from the following groups:			
Group Minimum points			Maximum points
A Imported and Common Elective Units		180	

	om other training packages and/or state		
	s can be added to this group, but they must		
	qualifications where the unit is first packaged		
	units have not being assigned a weighting by		
	z Industry Technical Advisory Committee,		
their weighting w		200	200
B Qualification Electure units from this Grant	tive Units You may select all your elective	200	380
	d Common Elective Units	<u> </u>	Weighting
oroup A imported and	d Corninon Elective Offics		Points
You may complete un	its to a maximum weighting of 180		1 Ollits
UEENEEC001B	Maintain documentation		20
UEENEEC002B	Source and purchase material/parts for instal	lation or	20
OLL! VLLCOOLD	service jobs	101101101	20
UEENEEC003B	Provide quotations for installation or service	iobs	20
UEENEEC010B	Deliver a service to customers	, 0.00	20
UEENEED101A	Use computer applications relevant to a work	kplace	20
UEENEEE009B	Comply with scheduled and preventative ma	'	20
	program processes		
UEENEEE020B	Provide basic instruction in the use of electro	technology	20
	apparatus	3)	
HLTAID003	Provide first aid		10
ICTTEN3056A	Install telecommunications network equipme	nt	40
MSS402001A	Apply competitive systems and practices		20
MSS402020A	Apply quick changeover procedures		20
MSS402021A	Apply Just in Time procedures		20
MSS402040A	Apply 5S procedures		20
MSS402080A	Undertake root cause analysis		20
MSS402081A	Contribute to the application of a proactive r	naintenance	20
	strategy		
	Imported units from other training packages	and/or	Up to 180
	state accredited courses can be added to this		points
	they must be selected from qualifications who	ere the unit	·
	is first packaged at AQF level 3. If units have	not being	
	assigned a weighting by the relevant EE-Oz I	ndustry	
	Technical Advisory Committee, their weighting	ng will be 10	
	points.		
	Note: For further information see Application	of the	
	NQC Flexibility Formula, UEE11 Electrotechno		
	Training Package, Version 1, Volume 1 Qualifi	0,	
	Framework		
Group B Qualification			Weighting
			Points
Complete units to a m	inimum weighting of 200		
You may select all you	r elective units from this Group		

UEENEEA101A	Assemble electronic components	40
UEENEEA102A	Select electronic components for assembly	20
UEENEEA103A	Set up and check electronic component assembly machines	40
UEENEEA104A	Modify electronic sub assemblies	40
UEENEEA105A	Conduct quality and functional tests on assembled electronic apparatus	20
UEENEEA106A	Use lead-free soldering techniques	40
UEENEEB101A	Operate and maintain amateur radio communication stations	40
UEENEED102A	Assemble, set-up and test computing devices	80
UEENEED104A	Use engineering applications software on personal computers	40
UEENEED112A	Support computer hardware and software for engineering applications	120
UEENEED129A	Develop web pages for engineering applications	40
UEENEED130A	Select, install, configure and test multimedia components	40
UEENEED143A	Install and configure a client computer operating system and software	40
UEENEED146A	Set up and configure basic local area network (LAN)	40
UEENEED153A	Set up, configure and test biometric devices	40
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40
UEENEEE108A	Lay wiring/cabling and terminate accessories for extra-low voltage (ELV) circuits	40
UEENEEE121A	Plan an integrated cabling installation system	40
UEENEEE122A	Carry out preparatory energy sector work activities	60
UEENEEE123A	Solve basic problems electronic and digital equipment and circuits	80
UEENEEE179A	Identify and select components, accessories and materials for energy sector work activities	20
UEENEEF102A	Install and maintain cabling for multiple access to telecommunication services	120
UEENEEF104A	Install and modify performance data communication copper cabling	40
UEENEEF105A	Install and modify optical fibre performance data communication cabling	40
UEENEEF106A	Solve problems in voice and data communications circuits	40
UEENEEF107A	Set up and configure the wireless capabilities of communications and data storage devices	40
UEENEEF108A	Select and arrange equipment for wireless communication networks	40

UEENEEF109A	Install and connect data and voice communication	40
UEENEEF110A	equipment Select and arrange data and voice equipment for	40
OLLIVELI 11071	local area networks	10
UEENEEF111A	Test, report and rectify faults in data and voice installations	40
UEENEEF114A	Set up and configure basic data communication	40
	systems	
UEENEEH101A	Repair basic computer equipment faults by replacement of modules/sub-assemblies	40
UEENEEH103A	Repair routine business equipment faults	120
UEENEEH104A	Set up and test residential video/audio equipment	40
UEENEEH105A	Verify functionality and compliance of custom electronic installations	40
UEENEEH106A	Assemble and set up fixed video/audio components	120
ueeneeh107A	and systems in buildings and premises Repair predictable faults in general electronic	40
OLLINLLI 1107A	apparatus	40
UEENEEH108A	Assemble and install reception antennae and signal	60
02211221110071	distribution equipment	
UEENEEH109A	Set up and test gaming and game equipment	60
UEENEEH110A	Install commercial video/audio system components	120
UEENEEH115A	Develop software solutions for microcontroller based systems	60
UEENEEH116A	Find and repair microwave amplifier section faults in electronic apparatus	40
UEENEEH117A	Carry out repairs of predictable faults in video and audio replay/recording apparatus	120
UEENEEH118A	Fault find and repair electronic apparatus	40
UEENEEH119A	Repair predictable faults in television receivers	120
UEENEEH120A	Fault find and repair gaming and games equipment	80
UEENEEH121A	Fault find and repair high volume office equipment	120
UEENEEH122A	Fault find and repair remote control apparatus	60
UEENEEH123A	Fault find and repair microwave heating apparatus	40
UEENEEH124A	Repair predictable faults in audio components	40
UEENEEH127A	Set up and adjust commercial radio frequency (RF) transmission and reception systems	60
UEENEEH128A	Install and test microwave antennae and waveguides	60
UEENEEH142A	Solve oscillator problems	40
UEENEEH150A	Assemble and set up basic security systems	80
UEENEEH151A	Install large security systems	100
UEENEEH152A	Enter instructions and test wired and wireless security systems	40
UEENEEH154A	Program and commission commercial security systems	60

UEENEEH155A	Program and commission commercial access	60
UEENEEH156A	control security systems Program and commission commercial security	60
	closed circuit television systems	
UEENEEH161A	Install fire detection and warning system apparatus	40
UEENEEH162A	Verify compliance and functionality of fire protection system installations	60
UEENEEH163A	Enter and verify programs for fire protection systems	40
UEENEEH164A	Commission large fire protection systems	40
UEENEEH165A	Troubleshoot fire protection systems	40
UEENEEH166A	Troubleshoot microcontroller based hardware systems	40
UEENEEH169A	Solve problems in basic electronic circuits	100
UEENEEH171A	Troubleshoot faults in television receivers	120
UEENEEH172A	Troubleshoot communication systems	80
UEENEEH173A	Troubleshoot professional audio reproduction components	120
UEENEEH174A	Troubleshoot audio - video recording equipment	120
UEENEEH187A	Solve problems in electronic musical equipment circuits	40
UEENEEI101A	Use instrumentation drawings, specification, standards and equipment manuals	40
UEENEEI116A	Assemble, enter and verify operating instructions in microprocessor equipped devices	20
UEENEEI117A	Calibrate, adjust and test measuring instruments	40
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60
UEENEEP010A	Disconnect - reconnect appliances connected to low voltage installation wiring	60
UEENEEP012A	Disconnect / reconnect composite appliances connected to low voltage installation wiring	60
UEENEEP017A	Locate and rectify faults in low voltage composite appliances using set procedures	20
UEENEEP024A	Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply	20
UEENEEP025A	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply	20

UEESS00168 - Sustainable - Installer of Grid Connected Photovoltaic Systems Skill Set (Release 1)

Skill Set Requirements

A total of 2 units of competency must be attained.		
UEERE0016	Install, configure and commission LV grid-connected photovoltaic power	
	systems	
UEERE0022	Solve basic problems in photovoltaic energy apparatus and systems	

UEESS00160 - Sustainable - Designer-Installer of Grid Connected Photovoltaic Systems Skill Set (Release 1)

Skill Set Requirements

A total of 3 units of competency must be attained.		
UEERE0011	Design grid-connected photovoltaic power supply systems	
UEERE0016	Install, configure and commission LV grid-connected photovoltaic power	
	systems	
UEERE0022	Solve basic problems in photovoltaic energy apparatus and systems	

Incomplete Qualifications

Note: Units highlighted are those available from LRES Training Management

MEM10105 - Certificate I in Engineering (Release 2)

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	Р
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 -	4
	electrical/electronic components	
MEM05003B	Perform soft soldering	2
MEM05004C	Perform routine oxy acetylene welding	2
MEM05005B	Carry out mechanical cutting	2
MEM05006C	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	2
	machines/equipment	
MEM07003B	Perform machine setting (routine)	4
MEM07024B	Operate and monitor machine/process	4
MEM07028B	Operate computer controlled machines/processes	2

Perform routine sharpening/maintenance of	4
	8
· · · · · · · · · · · · · · · · · · ·	2
	4
* *	4
	4
methods	4
Make up solutions	2
Manually finish/polish materials	6
Prepare surfaces using solvents and/or mechanical means	2
Prepare surfaces by abrasive blasting (basic)	4
<u> </u>	4
Control blast coating by-products, materials and	1
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Undertake occupational health and safety activities in the workplace	3
Work safely with industrial chemicals and materials	2
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	production tools and cutters Perform metal spinning lathe operations (basic) Use workshop machines for basic operations Perform wire, jig and barrel load/unload work Pre-treat work for subsequent surface coating Finish work using wet, dry and vapour deposition methods Make up solutions Manually finish/polish materials Prepare surfaces using solvents and/or mechanical means Prepare surfaces by abrasive blasting (basic) Apply protective coatings (basic) Control blast coating by-products, materials and emissions Pick and process order Perform production packaging Administer inventory procedures Package materials (stores and warehouse) Handle/move bulk fluids/gases Undertake manual handling Undertake warehouse receival process Order materials Use comparison and basic measuring devices Perform electrical/electronic measurement Perform engineering measurements Perform emergency first aid Undertake occupational health and safety activities in

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	1
	process	
MEM19010B	Produce rubber moulds for lost wax casting process	2
MEM19011B	Perform wax injection of moulds for lost wax casting	2
	process	
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
MEM50002B	Work safely on marine craft	1
MEM50003B	Follow work procedures to maintain the marine	1
	environment	
MEM50004B	Maintain quality of environment by following marina	1
	codes	
MEM50009B	Safely operate a mechanically powered recreational	2
	boat	
MSAENV272B	Participate in environmentally sustainable work	3
	practices	

MEM20205 - Certificate II in Engineering - Production Technology (Release 6)

Packaging Rules

The minimum requirements for achievement of the Certificate II in Engineering - Production Technology are:

- completion of all of the core units of competency listed below, and
- completion of elective units from the list below to the value of at least 50 points.

Points associated with prerequisites count towards the total (refer to units for details).

Appropriate elective units to the value of 11 points may be chosen from other endorsed Training Packages and accredited courses where those units are available for inclusion at Certificate II. Note that the elective units listed below include all of the units that are approved for selection from the MEM05 Training Package for use in this qualification. This meets the NSSC 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.

Additional qualification descriptors

The following additional descriptors are approved for use with this qualification: Marine Craft Manufacturing; Surface Finishing; Marine Craft Surface Finishing

Core units

• select all of the units from this list

Unit code	Unit title
MEM12023A	Perform engineering measurements
MEM13014A	Apply principles of occupational health and safety in the work environment
MEM14004A	Plan to undertake a routine task
MEM15002A	Apply quality systems
MEM15024A	Apply quality procedures
MEM16006A	Organise and communicate information
MEM16007A	Work with others in a manufacturing, engineering or related
	environment
MEM17003A	Assist in the provision of on the job training
MSAENV272B	Participate in environmentally sustainable work practices

Elective units

• select elective units from this list to the value of at least 50 points, including any prerequisites.

Unit code	Unit title	Р
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
MEM03005B	Rework and repair (electrical/electronic production)	8
MEM03006B	Set assembly stations	2
MEM04001B	Operate melting furnaces	4
MEM04002B	Perform gravity die casting	2
MEM04003B	Operate pressure die casting machine	4
MEM04004B	Prepare and mix sand for metal moulding	4
MEM04006B	Operate sand moulding and core making machines	8
MEM04007B	Pour molten metal	4
MEM04008B	Fettle and trim metal castings/forgings	4
MEM04018B	Perform general woodworking machine operations	4
MEM04019B	Perform refractory installation and repair	4
MEM05001B	Perform manual soldering/desoldering - electrical/electronic	4
	components	
MEM05002B	Perform high reliability soldering and desoldering	4
MEM05003B	Perform soft soldering	2
MEM05004C	Perform routine oxy acetylene welding	2
MEM05005B	Carry out mechanical cutting	2
MEM05006C	Perform brazing and/or silver soldering	2
MEM05007C	Perform manual heating and thermal cutting	2
MEM05009C	Perform automated thermal cutting	2
MEM05012C	Perform routine manual metal arc welding	2
MEM05013C	Perform manual production welding	2
MEM05014C	Monitor quality of production welding/fabrications	2
MEM05015D	Weld using manual metal arc welding process	4
MEM05017D	Weld using gas metal arc welding process	4
MEM05019D	Weld using gas tungsten arc welding process	4
MEM05023C	Weld using submerged arc welding process	4
MEM05027A	Perform aluminothermic welding	2
MEM05041B	Weld using powder flame spraying	4
MEM05049B	Perform routine gas tungsten arc welding	2
MEM05050B	Perform routine gas metal arc welding	2
MEM05051A	Select welding processes	2
MEM05052A	Apply safe welding practices	4
MEM05053A	Set and edit computer controlled thermal cutting machines	4
MEM06001B	Perform hand forging	4
MEM06002B	Perform hammer forging	4
MEM06003C	Carry out heat treatment	6
MEM06004B	Select heat treatment processes and test finished product	6

[T .
MEM06005B	Perform drop and upset forging	4
MEM06006C	Repair springs	4
MEM06007B	Perform basic incidental heat/quenching, tempering and annealing	2
MEM06008A	Hammer forge complex shapes	4
MEM06009A	Hand forge complex shapes	4
MEM07001B	Perform operational maintenance of machines/equipment	2
MEM07003B	Perform machine setting (routine)	4
MEM07004B	Perform machine setting (complex)	8
MEM07005C	Perform general machining	8
MEM07014B	Perform electro-discharge (EDM) machining operations	4
MEM07015B	Set computer controlled machines/processes	2
MEM07016C	Set and edit computer controlled machines/processes	4
MEM07024B	Operate and monitor machine/process	4
MEM07025B	Perform advanced machine/process operation	6
MEM07026B	Perform advanced plastic processing	6
MEM07027B	Perform advanced press operations	6
MEM07028B	Operate computer controlled machines/processes	2
MEM07029B	Perform routine sharpening/maintenance of production tools and	4
	cutters	
MEM07030C	Perform metal spinning lathe operations (basic)	8
MEM07031C	Perform metal spinning lathe operations (complex)	4
MEM07032B	Use workshop machines for basic operations	2
MEM07033B	Operate and monitor basic boiler	6
MEM07034A	Operate and monitor intermediate class boiler	4
MEM07040A	Set multistage integrated processes	6
MEM07041A	Perform production machining*	8
MEM08001B	Perform wire, jig and barrel load/unload work	4
MEM08002C	Pre-treat work for subsequent surface coating	4
MEM08003C	Perform electroplating operations	6
MEM08004B	Finish work using wet, dry and vapour deposition methods	4
MEM08005B	Prepare and produce specialised coatings	4
MEM08006B	Produce clear and/or coloured and/or sealed anodised films on	2
	aluminium	
MEM08007B	Control surface finish production and finished product quality	4
MEM08008B	Operate and control surface finishing waste treatment process	3
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
MEM08013B	Prepare surfaces by abrasive blasting (advanced)	4
MEM08014B	Apply protective coatings (basic)	4
MEM08015B	Apply protective coatings (basic) Apply protective coatings (advanced)	4
MEM08016B	Control blast coating by-products, materials and emissions	1
MEM08018B	Electroplate engineering coatings	6
MEM08019B	Electroplate engineering coatings Electroplate protective finishes	6
MEM08020B	Electroplate protective linishes Electroplate decorative finishes	6
IVIEIVIUOUZUB	Leiectrobiate decorative illiplies	0

MEM09002B	Interpret technical drawing	4
MEM10002B	Terminate and connect electrical wiring	3
MEM10009B	Install refrigeration and air conditioning plant and equipment	4
MEM10010B	Install pipework and pipework assemblies	4
MEM10011B	Terminate and connect specialist cables	3
MEM10013A	Install split air conditioning systems and associated pipework	6
MEM11001C	Erect/dismantle scaffolding and equipment	4
MEM11002C	Erect/dismantle complex scaffolding and equipment	4
MEM11003B	Coordinate erection/dismantling of complex scaffolding/equipment	4
MEM11004B	Undertake dogging	4
MEM11005B	Pick and process order	4
MEM11006B	Perform production packaging	2
MEM11007B	Administer inventory procedures	4
MEM11008B	Package materials (stores and warehouse)	2
MEM11009B	Handle/move bulk fluids/gases	4
MEM11010B	Operate mobile load shifting equipment	4
MEM11011B	Undertake manual handling	2
MEM11012B	Purchase materials	6
MEM11013B	Undertake warehouse receival process	4
MEM11014B	Undertake warehouse dispatch process	4
MEM11015B	Manage warehouse inventory system	6
MEM11016B	Order materials	2
MEM11017B	Organise and lead stocktakes	4
MEM11018B	Organise and maintain warehouse stock receival and/or dispatch	6
IVILIVITIOIOD	system	
MEM11019B	Undertake tool store procedures	4
MEM11020B	Perform advanced warehouse computer operations	4
MEM11021B	Perform advanced operation of load shifting equipment	2
MEM11022B	Operate fixed/moveable load shifting equipment	4
MEM11023A	Operate a bridge and gantry crane	4
MEM11024A	Undertake basic rigging*	4
MEM11025A	Operate a non-slewing mobile crane of greater than three tonnes	4
MEM12001B	Use comparison and basic measuring devices	2
MEM12001B	Perform electrical/electronic measurement	2
MEM12019B	Measure components using coordinate measuring machine	4
MEM12020B	Set and operate coordinate measuring machine	2
	-	3
MEM12024A	Perform computations Perform emergency first aid	1
MEM13001B	Perform emergency first aid)
MEM13002B	Undertake occupational health and safety activities in the workplace	3
MEM13003B	Work safely with molton metals (glass	2
MEM13004B	Work safely with molten metals/glass	
MEM13007B	Maintain water treatment systems for cooling towers	2
MEM13013B	Work safely with ionizing radiation	4
MEM14005A	Plan a complete activity	4
MEM15001B	Perform basic statistical quality control	2

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MEM19004B	Handle and examine gemstone materials	6
MEM19005B	Produce three-dimensional precision items	8
MEM19006B	Replace watch batteries	1
MEM19007B	Perform gemstone setting	6
MEM19008B	Prepare jewellery designs	6
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
MEM19012B	Produce jewellery wax model	4
MEM19013B	Produce jewellery metal masters	4
MEM19014B	Perform hand engraving	4
MEM19015B	Perform jewellery enamelling	4
MEM19016B	Construct jewellery components	4
MEM19017B	Fabricate jewellery items	6
MEM19018B	Repair jewellery items	6
MEM19020B	Fault-find and maintain micro-mechanisms	4
MEM19021B	Diagnose and service micro-mechanisms	6
MEM20001A	Produce keys	4
MEM20002A	Assemble and test lock mechanisms	6
MEM20003A	Install and upgrade locks and hardware	4
MEM20004A	Gain entry	4
MEM20006A	Maintain and service mechanical locking devices	6
MEM20014A	Perform a site security survey	2
MEM21001A	Replace watch batteries, capacitors and bands	2
MEM21002A	Perform watch movement exchange	2
MEM21003A	Perform watch case servicing, repair and refurbishment	4
MEM21004A	Clean watch and clock components	2
MEM21005A	Diagnose faults in quartz watches	2
MEM21006A	Service quartz watches	4
MEM21007A	Service complex quartz watches	4
MEM21008A	Service mechanical watches	4
MEM24001B	Perform basic penetrant testing	2
MEM24003B	Perform basic magnetic particle testing	2
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
MEM25011B	Install marine systems	8
MEM25012B	Install and test operations of marine auxiliary systems	6
MEM25014B	Perform marine slipping operations	2
MEM25015A	Assemble and install equipment and accessories/ancillaries	2
MEM26001A	Lay up composites using open moulding techniques	6
MEM26002A	Lay up composites using vacuum closed moulding techniques	6
MEM26003A	Lay up composites using pressure closed moulding techniques	6
MEM26004A	Make basic plugs for composites fabrication	3

MEM26005A	Make basic moulds for composites fabrication	3
MEM26006A	Mark and cut out sheets for composite use	4
MEM26007A	Select and use reinforcing appropriate for product	4
MEM26008A	Select and use resin systems appropriate for product	4
MEM26009A	Select and use cores and fillers appropriate for product	2
MEM26010A	Store and handle composite materials	2
MEM26011A	Determine materials and techniques for a composite component or product*	6
MEM26012A	Record and trial work processes for one-off composite products	4
MEM26013A	Select and use composite processes or systems appropriate for product	4
MEM26014A	Adjust resin chemicals for current conditions	4
MEM26015A	Select and apply repair techniques	6
MEM26016A	Select and use joining techniques	6
MEM26017A	Prepare composite or other substrate surfaces	4
MEM26018A	Organise composite trials	4
MEM26019A	Finish a composite product	4
MEM26020A	Identify and interpret required standards for composites	2
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
CPCCLDG3001A	Licence to perform dogging	0
CPCCLRG3001A	Licence to perform rigging basic level	0
CPCCLSF2001A	Licence to erect, alter and dismantle scaffolding basic level	0
CPCCLSF3001A	Licence to erect, alter and dismantle scaffolding intermediate level	0
PMBPROD291B	Operate resin infusion moulding equipment	2
PMBPROD294B	Operate resin transfer moulding equipment	2
PMBPROD298B	Operate equipment using pre-pregs material	2
PMBPROD391B	Produce composites using resin infusion	4
PMBPROD394B	Produce composites using resin transfer moulding	4
PMBPROD398B	Produce composites using pre-preqs	4
TLILIC0012A	Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above)	1
TLILIC2001A	Licence to operate a forklift truck	0
TLILIC2002A	Licence to operate an order picking forklift truck	0
TLILIC3003A	Licence to operate a bridge and gantry crane	0
TLILIC3006A	Licence to operate a non-slewing mobile crane (greater than three tonnes capacity)	0

MEM20413 - Certificate II in Engineering Pathways (Release 1)

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

MEM30105 - Certificate III in Engineering - Production Systems (Release 8)

Packaging Rules

The minimum requirements for achievement of the Certificate III in Engineering - Production Systems are:

- completion of all core units of competency listed below, and
- completion of Group A production stream units from the list below to the value of at least 40 points, and
- completion of Group B specialisation units from the list below to bring the total value of elective units to at least 73 points.

Points associated with prerequisites count towards the total (refer to units for details).

Appropriate Group B elective units to the value of 16 points may be chosen from other endorsed Training Packages and accredited courses where those units are available at Certificate III. Note that the elective units listed below include all of the units that are approved for selection from the MEM05 Training Package for use in this qualification. This meets the NSSC 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.

Additional qualification descriptors

The following additional descriptors are approved for use with this qualification: Surface Finishing; Marine Craft Surface Finishing.

Core Units

• select all of the units from this list

Unit code	Unit title
MEM12023A	Perform engineering measurements
MEM12024A	Perform computations
MEM13014A	Apply principles of occupational health and safety in the work
	environment
MEM14004A	Plan to undertake a routine task
MEM14005A	Plan a complete activity
MEM15002A	Apply quality systems
MEM15024A	Apply quality procedures
MEM16006A	Organise and communicate information
MEM16007A	Work with others in a manufacturing, engineering or related
	environment

MEM16008A	Interact with computing technology
MEM17003A	Assist in the provision of on the job training
MSAENV272B	Participate in environmentally sustainable work practices

Elective Units

Group A - Production stream units

• select units from this list to the value of at least 40 points

Unit code	Unit title	Р
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
MEM03005B	Rework and repair (electrical/electronic production)	8
MEM03006B	Set assembly stations	2
MEM04001B	Operate melting furnaces	4
MEM04002B	Perform gravity die casting	2
MEM04003B	Operate pressure die casting machine	4
MEM04004B	Prepare and mix sand for metal moulding	4
MEM04006B	Operate sand moulding and core making machines	8
MEM05001B	Perform manual soldering/desoldering -	4
	electrical/electronic components	
MEM05002B	Perform high reliability soldering and desoldering	4
MEM05003B	Perform soft soldering	2
MEM05027A	Perform aluminothermic welding	2
MEM06003C	Carry out heat treatment	6
MEM06004B	Select heat treatment processes and test finished	6
	product	
MEM06006C	Repair springs	4
MEM07001B	Perform operational maintenance of	2
	machines/equipment	
MEM07003B	Perform machine setting (routine)	4
MEM07004B	Perform machine setting (complex)	8
MEM07024B	Operate and monitor machine/process	4
MEM07025B	Perform advanced machine/process operation	6
MEM07026B	Perform advanced plastic processing	6
MEM07027B	Perform advanced press operations	6
MEM07028B	Operate computer controlled machines/processes	2
MEM07042A	Undertake corrections and basic maintenance to	4
	aluminium extrusion dies and die support systems	
MEM07043A	Identify causes of faulty aluminium extrusions	6
MEM07044A	Test a new aluminium extrusion die	4
MEM08001B	Perform wire, jig and barrel load/unload work	4
MEM08002C	Pre-treat work for subsequent surface coating	4

MEM08003C	Perform electroplating operations	6
MEM08004B	Finish work using wet, dry and vapour deposition	4
	methods	
MEM08005B	Prepare and produce specialised coatings	4
MEM08006B	Produce clear and/or coloured and/or sealed anodised	2
	films on aluminium	
MEM08007B	Control surface finish production and finished product	4
	quality	
MEM08008B	Operate and control surface finishing waste treatment	3
	process	
MEM08009C	Make up solutions	2
MEM08010B	Manually finish/polish materials	6
MEM08011B	Prepare surfaces using solvents and/or mechanical	2
	means	
MEM08012B	Prepare surfaces by abrasive blasting (basic)	4
MEM08013B	Prepare surfaces by abrasive blasting (advanced)	4
MEM08014B	Apply protective coatings (basic)	4
MEM08015B	Apply protective coatings (advanced)	4
MEM08016B	Control blast coating by-products, materials and	1
	emissions	
MEM08018B	Electroplate engineering coatings	6
MEM08019B	Electroplate protective finishes	6
MEM08020B	Electroplate decorative finishes	6
MEM09002B	Interpret technical drawing	4
MEM11001C	Erect/dismantle scaffolding and equipment	4
MEM11002C	Erect/dismantle complex scaffolding and equipment	4
MEM11003B	Coordinate erection/dismantling of complex	4
1112111110032	scaffolding/equipment	
MEM11004B	Undertake dogging	4
MEM11005B	Pick and process order	4
MEM11006B	Perform production packaging	2
MEM11007B	Administer inventory procedures	4
MEM11008B	Package materials (stores and warehouse)	2
MEM11009B	Handle/move bulk fluids/gases	4
MEM11010B	Operate mobile load shifting equipment	4
MEM11011B	Undertake manual handling	2
MEM11012B	Purchase materials	6
MEM11013B	Undertake warehouse receival process	4
MEM11013B	Undertake warehouse dispatch process	4
MEM11014B	Manage warehouse inventory system	6
MEM11016B	Order materials	2
MEM11017B	Organise and lead stocktakes	4
MEM11017B	Organise and maintain warehouse stock receival and/or	6
IVILIVITIOTOD		U
MEM11019B	dispatch system	4
	Undertake tool store procedures	
MEM11020B	Perform advanced warehouse computer operations	4

MEM11021B	Perform advanced operation of load shifting equipment	2
MEM11022B	Operate fixed/moveable load shifting equipment	4
MEM11023A	Operate a bridge and gantry crane	4
MEM11024A	Undertake basic rigging*	4
MEM11025A	Operate a non-slewing mobile crane of greater than	4
	three tonnes capacity	
MEM12001B	Use comparison and basic measuring devices	2
MEM12002B	Perform electrical/electronic measurement	2
MEM12019B	Measure components using coordinate measuring	4
	machine	
MEM13003B	Work safely with industrial chemicals and materials	2
MEM13004B	Work safely with molten metals/glass	2
MEM15001B	Perform basic statistical quality control	2
MEM15003B	Use improvement processes in team activities	4
MEM15004B	Perform inspection	2
MEM15005B	Select and control inspection processes and procedures	4
MEM18001C	Use hand tools	2
MEM18002B	Use power tools/hand held operations	2
MEM18098A	Prepare to perform work associated with fuel system	2
	installation and servicing*	
MEM26001A	Lay up composites using open moulding techniques	6
MEM26002A	Lay up composites using vacuum closed moulding	6
	techniques	
MEM26003A	Lay up composites using pressure closed moulding	6
	techniques	
MEM26004A	Make basic plugs for composites fabrication	3
MEM26005A	Make basic moulds for composites fabrication	3
MEM26006A	Mark and cut out sheets for composite use	4
MEM26007A	Select and use reinforcing appropriate for product	4
MEM26008A	Select and use resin systems appropriate for product	4
MEM26009A	Select and use cores and fillers appropriate for product	2
MEM26010A	Store and handle composite materials	2
MEM26011A	Determine materials and techniques for a composite	6
	component or product*	
MEM26012A	Record and trial work processes for one-off composite	4
	products	
MEM26013A	Select and use composite processes or systems	4
	appropriate for product	
MEM26014A	Adjust resin chemicals for current conditions	4
MEM26015A	Select and apply repair techniques	6
MEM26016A	Select and use joining techniques	6
MEM26017A	Prepare composite or other substrate surfaces	4
MEM26018A	Organise composite trials	4
MEM26019A	Finish a composite product	4
MEM26020A	Identify and interpret required standards for composites	2
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CPCCLRG3001A	Licence to perform rigging basic level	0
CPCCLSF2001A	Licence to erect, alter and dismantle scaffolding basic	0
	level	
CPCCLSF3001A	Licence to erect, alter and dismantle scaffolding	0
	intermediate level	
TLILIC0012A	Licence to operate a vehicle loading crane (capacity 10	1
	metre tonnes and above)	
TLILIC2001A	Licence to operate a forklift truck	0
TLILIC2002A	Licence to operate an order picking forklift truck	0
TLILIC3003A	Licence to operate a bridge and gantry crane	0
TLILIC3006A	Licence to operate a non-slewing mobile crane (greater	0
	than three tonnes capacity)	

Group B - Specialisation units

 select units from this list to bring the total value of Production stream and Specialisation units to at least 73 points, including any prerequisites.

Unit code	Unit title	Р
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
MEM03005B	Rework and repair (electrical/electronic production)	8
MEM03006B	Set assembly stations	2
MEM04001B	Operate melting furnaces	4
MEM04002B	Perform gravity die casting	2
MEM04003B	Operate pressure die casting machine	4
MEM04004B	Prepare and mix sand for metal moulding	4
MEM04005C	Produce moulds and cores by hand (jobbing)	16
MEM04006B	Operate sand moulding and core making machines	8
MEM04007B	Pour molten metal	4
MEM04008B	Fettle and trim metal castings/forgings	4
MEM04010B	Develop and manufacture wood patterns	20
MEM04011B	Produce polymer patterns	8
MEM04012B	Assemble plated patterns	8
MEM04013B	Develop and manufacture polystyrene patterns	2
MEM04014B	Develop and manufacture production patterns	8
MEM04015B	Develop and manufacture vacuum forming moulds and	6
	associated equipment	
MEM04018B	Perform general woodworking machine operations	4
MEM04019B	Perform refractory installation and repair	4
MEM05001B	Perform manual soldering/desoldering - electrical/electronic	4
	components	
MEM05002B	Perform high reliability soldering and desoldering	4
MEM05003B	Perform soft soldering	2

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Assemble fabricated components	8
Perform routine manual metal arc welding	2
Perform manual production welding	2
Monitor quality of production welding/fabrications	2
Weld using manual metal arc welding process	4
Weld using gas metal arc welding process	4
Weld using gas tungsten arc welding process	4
Weld using submerged arc welding process	4
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annealing	2
Hammer forge complex shapes	4
Hand forge complex shapes	4
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Set computer controlled machines/processes	2
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Set and edit computer controlled machines/processes	4
Set and edit computer controlled machines/processes Write basic NC/CNC programs	4
Write basic NC/CNC programs	4
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	Perform routine manual metal arc welding Perform manual production welding Monitor quality of production welding/fabrications Weld using manual metal arc welding process Weld using gas metal arc welding process Weld using gas tungsten arc welding process Weld using submerged arc welding process Weld using powder flame spraying Weld using flux core arc welding process Perform routine gas tungsten arc welding Perform routine gas metal arc welding Perform routine gas metal arc welding Select welding processes Apply safe welding practices Set and edit computer controlled thermal cutting machines Write basic NC/CNC programs for thermal cutting machines Perform hammer forging Carry out heat treatment Select heat treatment processes and test finished product Perform drop and upset forging Repair springs Perform basic incidental heat/quenching, tempering and annealing Hammer forge complex shapes Hand forge complex shapes Perform operational maintenance of machines/equipment Perform precision shaping/planing/slotting operations Perform machine setting (complex) Perform general machining Perform tool and cutter grinding operations Perform machining operations using horizontal and/or vertical boring machines Perform electro-discharge (EDM) machining operations

MEM07025B	Perform advanced machine/process operation	6
MEM07026B	Perform advanced plastic processing	6
MEM07027B	Perform advanced press operations	6
MEM07028B	Operate computer controlled machines/processes	2
MEM07029B	Perform routine sharpening/maintenance of production tools and	4
	cutters	
MEM07030C	Perform metal spinning lathe operations (basic)	8
MEM07031C	Perform metal spinning lathe operations (complex)	4
MEM07032B	Use workshop machines for basic operations	2
MEM07033B	Operate and monitor basic boiler	6
MEM07034A	Operate and monitor intermediate class boiler	4
MEM07040A	Set multistage integrated processes	6
MEM07041A	Perform production machining*	8
MEM07042A	Undertake corrections and basic maintenance to aluminium	4
	extrusion dies and die support systems	
MEM07043A	Identify causes of faulty aluminium extrusions	6
MEM07044A	Test a new aluminium extrusion die	4
MEM08001B	Perform wire, jig and barrel load/unload work	4
MEM08002C	Pre-treat work for subsequent surface coating	4
MEM08003C	Perform electroplating operations	6
MEM08004B	Finish work using wet, dry and vapour deposition methods	4
MEM08005B	Prepare and produce specialised coatings	4
MEM08006B	Produce clear and/or coloured and/or sealed anodised films on	2
	aluminium	
MEM08007B	Control surface finish production and finished product quality	4
MEM08008B	Operate and control surface finishing waste treatment process	3
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
MEM08013B	Prepare surfaces by abrasive blasting (advanced)	4
MEM08014B	Apply protective coatings (basic)	4
MEM08015B	Apply protective coatings (advanced)	4
MEM08016B	Control blast coating by-products, materials and emissions	1
MEM08018B	Electroplate engineering coatings	6
MEM08019B	Electroplate protective finishes	6
MEM08020B	Electroplate decorative finishes	6
MEM09002B	Interpret technical drawing	4
MEM09011B	Apply basic engineering design concepts	6
MEM09022A	Create 2D code files using computer aided manufacturing system	4
MEM10002B	Terminate and connect electrical wiring	3
MEM10004B	Enter and change programmable controller operational	2
	parameters	
MEM10011B	Terminate and connect specialist cables	3
MEM10013A	Install split air conditioning systems and associated pipework	6
MEM11001C	Erect/dismantle scaffolding and equipment	4

MEM11002C	Erect/dismantle complex scaffolding and equipment	4
MEM11003B	Coordinate erection/dismantling of complex	4
	scaffolding/equipment	
MEM11004B	Undertake dogging	4
MEM11005B	Pick and process order	4
MEM11006B	Perform production packaging	2
MEM11007B	Administer inventory procedures	4
MEM11008B	Package materials (stores and warehouse)	2
MEM11009B	Handle/move bulk fluids/gases	4
MEM11010B	Operate mobile load shifting equipment	4
MEM11011B	Undertake manual handling	2
MEM11012B	Purchase materials	6
MEM11013B	Undertake warehouse receival process	4
MEM11014B	Undertake warehouse dispatch process	4
MEM11015B	Manage warehouse inventory system	6
MEM11016B	Order materials	2
MEM11017B	Organise and lead stocktakes	4
MEM11018B	Organise and maintain warehouse stock receival and/or dispatch	6
	system	
MEM11019B	Undertake tool store procedures	4
MEM11020B	Perform advanced warehouse computer operations	4
MEM11021B	Perform advanced operation of load shifting equipment	2
MEM11022B	Operate fixed/moveable load shifting equipment	4
MEM12001B	Use comparison and basic measuring devices	2
MEM12002B	Perform electrical/electronic measurement	2
MEM11023A	Operate a bridge and gantry crane	4
MEM11024A	Undertake basic rigging*	4
MEM11025A	Operate a non-slewing mobile crane of greater than three tonnes capacity	4
MEM12003B	Perform precision mechanical measurement	2
MEM12004B	Perform precision electrical/electronic measurement	4
MEM12019B	Measure components using coordinate measuring machine	4
MEM12020B	Set and operate coordinate measuring machine	2
MEM12025A	Use graphical techniques and perform simple statistical computations	2
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
MEM13006B	Collect and evaluate occupational health and safety data for an enterprise or section of an enterprise	4
MEM13010A	Supervise occupational health and safety in an industrial work environment	4
MEM13013B	Work safely with ionizing radiation	4
MEM15001B	Perform basic statistical quality control	2

MEM15003B	Use improvement processes in team activities	4
MEM15004B	Perform inspection	2
MEM15005B	Select and control inspection processes and procedures	4
MEM16002C	Conduct formal interviews and negotiations	4
MEM16004B	Perform internal/external customer service	2
MEM16005A	Operate as a team member to conduct manufacturing,	2
	engineering or related activities	
MEM16011A	Communicate with individuals and small groups	2
MEM16013A	Operate in a self-directed team	2
MEM17001B	Assist in development and deliver training in the workplace	2
MEM17002B	Conduct workplace assessment	2
MEM18001C	Use hand tools	2
MEM18002B	Use power tools/hand held operations	2
MEM18003C	Use tools for precision work	4
MEM18010C	Perform equipment condition monitoring and recording	4
MEM18045B	Fault find/repair electrical equipment/components up to 250	4
	volts single phase supply	
MEM18049C	Disconnect/reconnect fixed wired equipment up to 1000 volts	3
	a.c./1500 volts d.c.	
MEM18055B	Dismantle, replace and assemble engineering components	3
MEM18063B	Terminate signal and data cables	4
MEM18071B	Connect/disconnect fluid conveying system components	2
MEM18072B	Manufacture fluid conveying conductor assemblies	4
MEM18084A	Commission and decommission split air conditioning systems	4
MEM18085A	Install, service and repair domestic air conditioning and	6
	refrigeration appliances	
MEM18086B	Test, recover, evacuate and charge refrigeration systems	4
MEM18098A	Prepare to perform work associated with fuel system installation and servicing*	2
MEM19001B	Perform jewellery metal casting	6
MEM19002B	Prepare jewellery illustrations	4
MEM19003B	Handle gem materials	2
MEM19004B	Handle and examine gemstone materials	6
MEM19005B	Produce three-dimensional precision items	8
MEM19006B	Replace watch batteries	1
MEM19007B	Perform gemstone setting	6
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
MEM19012B	Produce jewellery wax model	4
MEM19014B	Perform hand engraving	4
MEM19015B	Perform jewellery enamelling	4
MEM19016B	Construct jewellery components	4
MEM19017B	Fabricate jewellery items	6
MEM19020B	Fault-find and maintain micro-mechanisms	4
MEM19021B	Diagnose and service micro-mechanisms	6

MEM20001A	Produce keys	4
MEM20002A	Assemble and test lock mechanisms	6
MEM20003A	Install and upgrade locks and hardware	4
MEM20004A	Gain entry	4
MEM20006A	Maintain and service mechanical locking devices	6
MEM20014A	Perform a site security survey	2
MEM24001B	Perform basic penetrant testing	2
MEM24002B	Perform penetrant testing	4
MEM24003B	Perform basic magnetic particle testing	2
MEM25001B	Apply fibre-reinforced materials	2
MEM25002B	Form and integrate fibre-reinforced structures	4
MEM25003B	Set up marine vessel structures	4
MEM25004B	Fair and shape surfaces	2
MEM25005B	Construct and assemble marine vessel timber components	8
MEM25006B	Undertake marine sheathing operations	2
MEM25007B	Maintain marine vessel surfaces	4
MEM25008B	Repair marine vessel surfaces and structures	4
MEM25009B	Form timber shapes using hot processes	2
MEM25010B	Perform fitout procedures	4
MEM25011B	Install marine systems	8
MEM25012B	Install and test operations of marine auxiliary systems	6
MEM25013B	Produce three-dimensional plugs/moulds	12
MEM25014B	Perform marine slipping operations	2
MEM25015A	Assemble and install equipment and accessories/ancillaries	2
MEM30012A	Apply mathematical techniques in a manufacturing, engineering	4
	or related environment	
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
MSAENV472B	Participate in environmentally sustainable work practices	4
AURVTN2002	Carry out panel repairs	4
CPCCLDG3001A	Licence to perform dogging	0
CPCCLRG3001A	Licence to perform rigging basic level	0
CPCCLSF2001A	Licence to erect, alter and dismantle scaffolding basic level	0
CPCCLSF3001A	Licence to erect, alter and dismantle scaffolding intermediate level	0
TLILIC0012A	Licence to operate a vehicle loading crane (capacity 10 metre tonnes and above)	1
TLILIC2001A	Licence to operate a forklift truck	0
TLILIC2002A	Licence to operate an order picking forklift truck	0
TLILIC3003A	Licence to operate a bridge and gantry crane	0
TLILIC3006A	Licence to operate a non-slewing mobile crane (greater than three tonnes capacity)	0
PMBPROD291B	Operate resin infusion moulding equipment	2
	Operate resin transfer moulding equipment	2

PMBPROD298B	Operate equipment using pre-pregs material	2
PMBPROD391B	Produce composites using resin infusion	4
PMBPROD394B	Produce composites using resin transfer moulding	4
PMBPROD398B	Produce composites using pre-pregs	4

MEM30305 - Certificate III in Engineering - Fabrication Trade (Release 4)

Packaging Rules

Packaging Rules

The minimum requirements for achievement of the Certificate III in Engineering - Fabrication Trade are:

- completion of all core units of competency listed below, and
- completion of Group A Fabrication stream units listed below to the value of at least 40 points, and
- completion of units from Group B Certificate III Trade specialisation units listed in Appendix 1, Volume 1 of the Training Package, to bring the total value to at least 73 points

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

Appropriate Group B elective units to the value of 16 points may be chosen from other endorsed Training Packages and accredited courses where those units are available for inclusion at Certificate III. Note that the elective units listed below include all of the units that are approved for selection from the MEM Training Package for use in this 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.

Only select units that would be suitable for Fabrication Trade occupational outcomes.

Additional qualification descriptors

The following additional descriptors are approved for use with this qualification: Casting and Moulding; Heavy Fabrication; Light Fabrication; Maintenance; Patternmaking; Surface Finishing; Welding.

Core units

• select all of the units from this list

Unit code	Unit title		
MEM12023A	Perform engineering measurements		
MEM12024A	Perform computations		
MEM13014A	Apply principles of occupational health and safety in the work environment		

MEM14004A	Plan to undertake a routine task		
MEM14005A	Plan a complete activity		
MEM15002A	Apply quality systems		
MEM15024A	Apply quality procedures		
MEM16006A	Organise and communicate information		
MEM16007A	Work with others in a manufacturing, engineering or related		
	environment		
MEM16008A	Interact with computing technology		
MEM17003A	Assist in the provision of on the job training		
MSAENV272B	Participate in environmentally sustainable work practices		

Elective Units

Group A - Fabrication Trade stream units

• select units from this list to the value of at least 40 points

Unit code	Unit title	Р
MEM03003B	Perform sheet and plate assembly	4
MEM04001B	Operate melting furnaces	4
MEM04002B	Perform gravity die casting	2
MEM04003B	Operate pressure die casting machine	4
MEM04004B	Prepare and mix sand for metal moulding	4
MEM04005C	Produce moulds and cores by hand (jobbing)	16
MEM04006B	Operate sand moulding and core making machines	8
MEM04007B	Pour molten metal	4
MEM04008B	Fettle and trim metal castings/forgings	4
MEM04010B	Develop and manufacture wood patterns	20
MEM04011B	Produce polymer patterns	8
MEM04012B	Assemble plated patterns	8
MEM04013B	Develop and manufacture polystyrene patterns	2
MEM04014B	Develop and manufacture production patterns	8
MEM04015B	Develop and manufacture vacuum forming moulds and associated equipment	6
MEM04016C	Develop and manufacture precision models	6
MEM04017B	Develop and manufacture gear, conveyor screw and propeller patterns	4

		Τ.
MEM04018B	Perform general woodworking machine operations	4
MEM04019B	Perform refractory installation and	4
IVILIVIOTOTOD	repair	7
MEM05001B	Perform manual soldering/desoldering -	4
	electrical/electronic components	
MEM05002B	Perform high reliability soldering and	4
WEIWIOSOCE	desoldering	
MEM05003B	Perform soft soldering	2
MEM05004C	Perform routine oxy acetylene welding	2
MEM05005B	Carry out mechanical cutting	2
MEM05006C	Perform brazing and/or silver soldering	2
MEM05007C	Perform manual heating and thermal	2
111211103007	cutting	
MEM05008C	Perform advanced manual thermal	2
IVILIVIOSOGC	cutting, gouging and shaping	
MEM05009C	Perform automated thermal cutting	2
MEM05010C	3	8
MENIUSUIUC	Apply fabrication, forming and shaping	8
N 45N 405011D	techniques	0
MEM05011D	Assemble fabricated components	8
MEM05012C	Perform routine manual metal arc welding	2
MEM05013C	Perform manual production welding	2
MEM05014C	Monitor quality of production	2
WEWOODTTE	welding/fabrications	
MEM05015D	Weld using manual metal arc welding	4
	process	
MEM05016C	Perform advanced welding using	4
	manual metal arc welding process	
MEM05017D	Weld using gas metal arc welding	4
	process	
MEM05018C	Perform advanced welding using gas	4
	metal arc welding process	
MEM05019D	Weld using gas tungsten arc welding	4
	process	
MEM05020C	Perform advanced welding using gas	4
	tungsten arc welding process	
MEM05022C	Perform advanced welding using oxy	6
	acetylene welding process	
MEM05023C	Weld using submerged arc welding	4
	process	
MEM05026C	Apply welding principles	4
MEM05036C	Repair/replace/modify fabrications	4
MEM05037C	Perform geometric development	6
MEM05038B	Perform advanced geometric	2
INITINIOOOO	development - cylindrical/rectangular	
	L development - cyllilancal/rectarigular	

N4EN40E020D	Deufe von del von del von de tri	
MEM05039B	Perform advanced geometric	2
N 45N 4050 40D	development - conical	
MEM05040B	Perform advanced geometric	4
N 45 N 40 5 0 A4 D	development - transitions	
MEM05041B	Weld using powder flame spraying	4
MEM05047B	Weld using flux core arc welding	4
	process	
MEM05048B	Perform advanced welding using flux	4
	core arc welding process	_
MEM05049B	Perform routine gas tungsten arc	2
	welding	
MEM05050B	Perform routine gas metal arc welding	2
MEM05051A	Select welding processes	2
MEM05052A	Apply safe welding practices	4
MEM05053A	Set and edit computer controlled	4
	thermal cutting machines	
MEM05054A	Write basic NC/CNC programs for	4
	thermal cutting machines	
MEM06001B	Perform hand forging	4
MEM06002B	Perform hammer forging	4
MEM06003C	Carry out heat treatment	6
MEM06004B	Select heat treatment processes and test	6
	finished product	
MEM06005B	Perform drop and upset forging	4
MEM06006C	Repair springs	4
MEM06008A	Hammer forge complex shapes	4
MEM06009A	Hand forge complex shapes	4
MEM08001B	Perform wire, jig and barrel load/unload	4
	work	
MEM08002C	Pre-treat work for subsequent surface	4
	coating	
MEM08003C	Perform electroplating operations	6
MEM08004B	Finish work using wet, dry and vapour	4
	deposition methods	
MEM08005B	Prepare and produce specialised	4
	coatings	
MEM08006B	Produce clear and/or coloured and/or	2
	sealed anodised films on aluminium	
MEM08007B	Control surface finish production and	4
	finished product quality	
MEM08008B	Operate and control surface finishing	3
	waste treatment process	
MEM08009C	Make up solutions	2
MEM08010B	Manually finish/polish materials	6
MEM08011B	Prepare surfaces using solvents and/or	2
TVILIVIOUTID	mechanical means	_
	L'inceriainear mearis	

MEM08012B	Prepare surfaces by abrasive blasting (basic)	4
MEM08013B	Prepare surfaces by abrasive blasting (advanced)	4
MEM08014B	Apply protective coatings (basic)	4
MEM08015B	Apply protective coatings (advanced)	4
MEM08016B	Control blast coating by-products, materials and emissions	1
MEM08018B	Electroplate engineering coatings	6
MEM08019B	Electroplate protective finishes	6
MEM08020B	Electroplate decorative finishes	6
MEM09002B	Interpret technical drawing	4
MEM10001C	Erect structures	4
MEM12007D	Mark off/out structural fabrications and shapes	4
MEM18001C	Use hand tools	2
MEM18002B	Use power tools/hand held operations	2
MEM18098A	Prepare to perform work associated with fuel system installation and servicing*	2

MEM30319 - Certificate III in Engineering - Fabrication Trade (Release 1)

Packaging Rules

To be awarded the MEM30319 Certificate III in Engineering – Fabrication Trade, units of competency to the value of 96 points must be achieved, chosen as outlined below:

- all core units of competency listed below (totalling 33 points)
- elective units of competency to a minimum value of 40 points from Groups A, B, C, D, E, F and G as described below
- elective units of competency to a maximum value of 23 points from Group H to bring the total value to 96 points.

To be awarded the MEM30319 Certificate III in Engineering – Fabrication Trade (Boilermaking), units of competency to the value of 96 points must be achieved, chosen as outlined below:

- all core units of competency listed below (totalling 33 points)
- elective units of competency to a minimum value of 40 points from Group B as described below
- elective units of competency to a maximum value of 23 points from Group H to bring the total value to 96 points.

To be awarded the MEM30319 Certificate III in Engineering – Fabrication Trade (Welding), units of competency to the value of 96 points must be achieved, chosen as outlined below:

- all core units of competency listed below (totalling 33 points)
- elective units of competency to a minimum value of 40 points from Group C as described below
- elective units of competency to a maximum value of 23 points from Group H to bring the total value to 96 points.

To be awarded the MEM30319 Certificate III in Engineering – Fabrication Trade (Boilermaking/welding), units of competency to the value of 96 points must be achieved, chosen as outlined below:

- all core units of competency listed below (totalling 33 points)
- elective units of competency to a minimum value of 40 points from Group D as described below
- elective units of competency to a maximum value of 23 points from Group H to bring the total value to 6 points.

To be awarded the MEM30319 Certificate III in Engineering – Fabrication Trade (Sheetmetal working), units of competency to the value of 96 points must be achieved, chosen as outlined below:

• all core units of competency listed below (totalling 33 points)

- elective units of competency to a minimum value of 40 points from Group E as described below
- elective units of competency to a maximum value of 23 points from Group H to bring the total value to 96 points.

To be awarded the MEM30319 Certificate III in Engineering – Fabrication Trade (Blacksmithing), units of competency to the value of 96 points must be achieved, chosen as outlined below:

- all core units of competency listed below (totalling 33 points)
- elective units of competency to a minimum value of 40 points from Group F as described below
- elective units of competency to a maximum value of 23 points from Group H to bring the total value to 96 points.

To be awarded the MEM30319 Certificate III in Engineering – Fabrication Trade (Surface finishing), units of competency to the value of 96 points must be achieved, chosen as outlined below:

- all core units of competency listed below (totalling 33 points)
- elective units of competency to a minimum value of 40 points from Group G as described below
- elective units of competency to a maximum value of 23 points from Group H to bring the total value to 96 points.

Appropriate Group H elective units to the value of 8 points may be chosen from this Training Package, other endorsed Training Packages and accredited courses where those units are available for inclusion at Certificate III. Only select units that would be suitable for occupational outcomes in a fabrication trade 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	Р	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

Packaging for a generic fabrication trade qualification - choose a minimum value of 40 points from Group A.

Packaging for a trade specialisation - choose a minimum value of 40 points from **one of either** Group B or C or D or E or F or G.

Group A - Fabrication Trade generic electives

Unit code	Unit title	Р	Prereq
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	*
MEM05008	Perform advanced manual thermal cutting, gouging and shaping	2	*
MEM05009	Perform automated thermal cutting	2	*
MEM05010	Apply fabrication, forming and shaping techniques	8	*
MEM05011	Assemble fabricated components	8	*
MEM05012	Perform routine manual metal arc welding	2	*
MEM05014	Monitor quality of production welding/fabrications	2	*
MEM05015	Weld using manual metal arc welding process	4	*
MEM05016	Perform advanced welding using manual metal arc welding process	4	*
MEM05017	Weld using gas metal arc welding process	4	*
MEM05018	Perform advanced welding using gas metal arc welding process	4	*
MEM05019	Weld using gas tungsten arc welding process	4	*
MEM05020	Perform advanced welding using gas tungsten arc welding process	4	*
MEM05022	Perform advanced welding using oxy acetylene welding process	6	*
MEM05023	Weld using submerged arc welding process	4	*
MEM05036	Repair, replace and/or modify fabrications	4	*
MEM05037	Perform geometric development	6	*
MEM05041	Weld using flame powder spraying	4	*

MEM05047	Weld using flux core arc welding process	4	*
MEM05048	Perform advanced welding using flux core arc welding process	4	*
MEM05049	Perform routine gas tungsten arc welding	2	*
MEM05050	Perform routine gas metal arc welding	2	*
MEM05051	Select welding processes	2	*
MEM05052	Apply safe welding practices	4	*
MEM05053	Set and edit computer controlled thermal cutting machines	4	*
MEM05055	Weld using oxy fuel gas welding process	4	*
MEM05056	Perform routine flux core arc welding	2	*
MEM05057	Perform routine submerged arc welding	2	*
MEM08010	Manually finish/polish materials	6	*
MEM09011	Apply basic engineering design concepts	6	*
MEM12007	Mark off/out structural fabrications and shapes	4	*
MEM18055	Dismantle, replace and assemble engineering components	3	*

Group B - Boilermaking Trade specialisation electives

Unit code	Unit title	Р	Prereq
MEM05004	Perform routine oxy fuel gas welding	2	*
MEM05005	Carry out mechanical cutting	2	*
MEM05007	Perform manual heating and thermal cutting	2	*
MEM05008	Perform advanced manual thermal cutting, gouging and	2	*
	shaping		
MEM05009	Perform automated thermal cutting	2	*
MEM05010	Apply fabrication, forming and shaping techniques	8	*
MEM05011	Assemble fabricated components	8	*
MEM05012	Perform routine manual metal arc welding	2	*
MEM05015	Weld using manual metal arc welding process	4	*
MEM05017	Weld using gas metal arc welding process	4	*
MEM05019	Weld using gas tungsten arc welding process	4	*
MEM05023	Weld using submerged arc welding process	4	*
MEM05036	Repair, replace and/or modify fabrications	4	*
MEM05037	Perform geometric development	6	*
MEM05047	Weld using flux core arc welding process	4	*
MEM05049	Perform routine gas tungsten arc welding	2	*
MEM05050	Perform routine gas metal arc welding	2	*
MEM05051	Select welding processes	2	*
MEM05052	Apply safe welding practices	4	*
MEM05055	Weld using oxy fuel gas welding process	4	*
MEM05056	Perform routine flux core arc welding	2	*
MEM05057	Perform routine submerged arc welding	2	*
MEM09011	Apply basic engineering design concepts	6	*
MEM12007	Mark off/out structural fabrications and shapes	4	*
MEM18055	Dismantle, replace and assemble engineering components	3	*

Group C – Welding Trade specialisation electives

Unit code	Unit title	Р	Prereq
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	*
MEM05011	Assemble fabricated components	8	*
MEM05012	Perform routine manual metal arc welding	2	*
MEM05014	Monitor quality of production welding/fabrications	2	*
MEM05015	Weld using manual metal arc welding process	4	*
MEM05016	Perform advanced welding using manual metal arc welding	4	*
	process		
MEM05017	Weld using gas metal arc welding process	4	*
MEM05018	Perform advanced welding using gas metal arc welding process	4	*
MEM05019	Weld using gas tungsten arc welding process	4	*
MEM05020	Perform advanced welding using gas tungsten arc welding	4	*
	process		
MEM05022	Perform advanced welding using oxy acetylene welding process	6	*
MEM05023	Weld using submerged arc welding process	4	*
MEM05041	Weld using flame powder spraying	4	*
MEM05047	Weld using flux core arc welding process	4	*
MEM05048	Perform advanced welding using flux core arc welding process	4	*
MEM05049	Perform routine gas tungsten arc welding	2	*
MEM05050	Perform routine gas metal arc welding	2	*
MEM05051	Select welding processes	2	*
MEM05052	Apply safe welding practices	4	*
MEM05055	Weld using oxy fuel gas welding process	4	*
MEM05056	Perform routine flux core arc welding	2	*
MEM05057	Perform routine submerged arc welding	2	*

Group D $\,-\,$ Boilermaking/Welding Trade specialisation electives

Unit code	Unit title	Р	Prereq
MEM05004	Perform routine oxy fuel gas welding	2	*
MEM05005	Carry out mechanical cutting	2	*
MEM05007	Perform manual heating and thermal cutting	2	*
MEM05008	Perform advanced manual thermal cutting, gouging and	2	*
	shaping		
MEM05009	Perform automated thermal cutting	2	*
MEM05010	Apply fabrication, forming and shaping techniques	8	*
MEM05011	Assemble fabricated components	8	*
MEM05012	Perform routine manual metal arc welding	2	*
MEM05015	Weld using manual metal arc welding process	4	*
MEM05016	Perform advanced welding using manual metal arc welding	4	*
	process		
MEM05017	Weld using gas metal arc welding process	4	*
MEM05018	Perform advanced welding using gas metal arc welding process	4	*

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MEM05019	Weld using gas tungsten arc welding process	4	*
MEM05020	Perform advanced welding using gas tungsten arc welding	4	*
	process		
MEM05022	Perform advanced welding using oxy acetylene welding process	6	*
MEM05023	Weld using submerged arc welding process	4	*
MEM05036	Repair, replace and/or modify fabrications	4	*
MEM05037	Perform geometric development	6	*
MEM05041	Weld using flame powder spraying	4	*
MEM05047	Weld using flux core arc welding process	4	*
MEM05048	Perform advanced welding using flux core arc welding process	4	*
MEM05049	Perform routine gas tungsten arc welding	2	*
MEM05050	Perform routine gas metal arc welding	2	*
MEM05051	Select welding processes	2	*
MEM05052	Apply safe welding practices	4	*
MEM05055	Weld using oxy fuel gas welding process	4	*
MEM05056	Perform routine flux core arc welding	2	*
MEM05057	Perform routine submerged arc welding	2	*
MEM09011	Apply basic engineering design concepts	6	*
MEM12007	Mark off/out structural fabrications and shapes	4	*
MEM18055	Dismantle, replace and assemble engineering components	3	*

Group E - Sheetmetal working Trade specialisation electives

Unit code	Unit title	Р	Prereq
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	*
MEM05010	Apply fabrication, forming and shaping techniques	8	*
MEM05011	Assemble fabricated components	8	*
MEM05012	Perform routine manual metal arc welding	2	*
MEM05015	Weld using manual metal arc welding process	4	*
MEM05017	Weld using gas metal arc welding process	4	*
MEM05019	Weld using gas tungsten arc welding process	4	*
MEM05037	Perform geometric development	6	*
MEM05049	Perform routine gas tungsten arc welding	2	*
MEM05050	Perform routine gas metal arc welding	2	*
MEM05051	Select welding processes	2	*
MEM05052	Apply safe welding practices	4	*
MEM05055	Weld using oxy fuel gas welding process	4	*
MEM05056	Perform routine flux core arc welding	2	*
MEM05057	Perform routine submerged arc welding	2	*
MEM09011	Apply basic engineering design concepts	6	*
MEM12007	Mark off/out structural fabrications and shapes	4	*
MEM18055	Dismantle, replace and assemble engineering components	3	*

Group F – Blacksmithing Trade specialisation electives

Unit code	Unit title	Р	Prereq
MEM05005	Carry out mechanical cutting	2	*
MEM05007	Perform manual heating and thermal cutting	2	*
MEM05012	Perform routine manual metal arc welding	2	*
MEM05049	Perform routine gas tungsten arc welding	2	*
MEM05050	Perform routine gas metal arc welding	2	*
MEM05056	Perform routine flux core arc welding	2	*
MEM05057	Perform routine submerged arc welding	2	*
MEM06001	Perform hand forging	4	*
MEM06002	Perform hammer forging	4	*
MEM06003	Carry out heat treatment	6	*
MEM06004	Select heat treatment processes and test finished product	6	*
MEM06005	Perform drop and upset forging	4	*
MEM06006	Repair springs	4	*
MEM06007	Perform basic incidental heat/quenching, tempering and	2	*
	annealing		
MEM06008	Hammer forge complex shapes	4	*
MEM06009	Hand forge complex shapes	4	*

Group G – Surface Finishing Trade specialisation electives

Unit code	Unit title	Р	Pre-
			req
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	*
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		*
MEM08009	Make up solutions		*
MEM08010	Manually finish/polish materials		*
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	*
MEM08020	Electroplate decorative finishes	6	*
MEM11009	Handle/move bulk fluids/gases	4	*

Group H – General electives

Unit code	Unit title	Р	Prereq
MEM05001	Perform manual soldering/desoldering – electrical/electronic		*
	components		
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	*
MEM05008	Perform advanced manual thermal cutting, gouging and	2	*
	shaping		
MEM05009	Perform automated thermal cutting	2	*
MEM05010	Apply fabrication, forming and shaping techniques	8	*
MEM05011	Assemble fabricated components	8	*
MEM05012	Perform routine manual metal arc welding	2	*
MEM05014	Monitor quality of production welding/fabrications	2	*
MEM05015	Weld using manual metal arc welding process	4	*
MEM05016	Perform advanced welding using manual metal arc welding	4	*
	process		
MEM05017	Weld using gas metal arc welding process	4	*
MEM05018	Perform advanced welding using gas metal arc welding process	4	*
MEM05019	Weld using gas tungsten arc welding process		*
MEM05020	Perform advanced welding using gas tungsten arc welding	4	*
	process		
MEM05022	Perform advanced welding using oxy acetylene welding process	6	*
MEM05023	Weld using submerged arc welding process	4	*
MEM05027	Perform aluminothermic welding	2	*
MEM05036	Repair, replace and/or modify fabrications	4	*
MEM05037	Perform geometric development	6	*
MEM05041	Weld using flame powder spraying	4	*
MEM05047	Weld using flux core arc welding process	4	*
MEM05048	Perform advanced welding using flux core arc welding process	4	*
MEM05049	Perform routine gas tungsten arc welding	2	*
MEM05050	Perform routine gas metal arc welding	2	*
MEM05051	Select welding processes	2	*
MEM05052	Apply safe welding practices	4	*
MEM05053	Set and edit computer controlled thermal cutting machines	4	*
MEM05055	Weld using oxy fuel gas welding process	4	*
MEM05056	Perform routine flux core arc welding	2	*
MEM05057	Perform routine submerged arc welding	2	*
MEM06001	Perform hand forging	4	*
MEM06002	Perform hammer forging	4	*
MEM06003	Carry out heat treatment	6	*
MEM06004	Select heat treatment processes and test finished product	6	*

MEM06005	Perform drop and upset forging	4	*
MEM06006	Repair springs	4	*
MEM06007	Perform basic incidental heat/quenching, tempering and	2	*
	annealing		
MEM06008	Hammer forge complex shapes		*
MEM06009	Hand forge complex shapes	4	*
MEM07001	Perform operational maintenance of machines/equipment	2	*
MEM07015	Set computer controlled machines and processes	2	*
MEM07016	Set and edit computer controlled machines and processes	4	*
MEM07024	Operate and monitor machine and process	4	*
MEM07028	Operate computer controlled machines and processes	2	*
MEM07030	Perform basic metal spinning lathe operations	8	*
MEM07031	Perform complex metal spinning lathe operations	4	*
MEM07032	Use workshop machines for basic operations	2	*
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	*
MEM08006	Produce clear and/or coloured and/or sealed anodised films on	2	*
11121110000	aluminium		
MEM08007	Control surface finish production and finished product quality	4	*
MEM08008	Operate and control surface finishing waste treatment process	3	*
MEM08009	Make up solutions		*
MEM08010	Manually finish/polish materials		*
MEM08011	Prepare surfaces using solvents and/or mechanical means	6	*
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	*
MEM08020	Electroplate decorative finishes	6	*
MEM09003	Prepare basic engineering drawing	8	*
MEM09011	Apply basic engineering design concepts	6	*
MEM10001	Erect structures	4	*
MEM10010	Install pipework and pipework assemblies	4	*
MEM11001	Erect/dismantle scaffolding and equipment	4	*
MEM11009	Handle/move bulk fluids/gases	4	*
MEM11010	Operate mobile load shifting equipment	4	*
MEM11016	Order materials	2	*
MEM11022	Operate fixed/moveable load shifting equipment	4	*
MEM12007	Mark off/out structural fabrications and shapes	4	*
MEM12025	Use graphical techniques and perform simple statistical	2	*
.*	computations	-	

MEM13001	Perform emergency first aid	1	*
MEM13002	Undertake work health and safety activities in the workplace		*
MEM13003	Work safely with industrial chemicals and materials	2	*
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	*
MEM16005	Operate as a team member to conduct manufacturing,	2	*
	engineering or related activities		
MEM18003	Use tools for precision work	4	*
MEM18011	Shut down and isolate machines/equipment	2	*
MEM18055	Dismantle, replace and assemble engineering components	3	*
MEM24001B	Perform basic penetrant testing	2	*
MEM24003B	Perform basic magnetic particle testing	2	*
MEM24007B	Perform ultrasonic thickness testing	2	*
MSMENV472	Implement and monitor environmentally sustainable work	4	
	practices		
TLILIC0003	Licence to operate a forklift truck	0	
TLILIC0002	Licence to operate a vehicle loading crane (capacity 10 metre	1	
	tonnes and above)		

MEM30205 - Certificate III in Engineering - Mechanical Trade (Release 3)

Packaging Rules

Packaging Rules

The minimum requirements for achievement of the Certificate III in Engineering - Mechanical Trade are:

- completion of all core units of competency listed below, and
- completion of Group A Mechanical Trade stream units to the value of at least 40 points, and
- completion of units from Group B Certificate III Trade specialisation units listed in Appendix 1, Volume 1 of the Training Package, to bring the total value to at least 73 points

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

Appropriate Group B elective units to the value of 16 points may be chosen from other endorsed Training Packages and accredited courses where those units are available for inclusion at Certificate III. Note that the elective units listed below include all of the units that are approved for selection from the MEM Training Package for use in this 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.

Only select units that would be suitable for Mechanical Trade occupational outcomes.

Additional qualification descriptors

The following additional descriptors are approved for use with this qualification: Refrigeration and Air Conditioning; Instrumentation; Maintenance; Patternmaking; Toolmaking; Watchmaking; Machining.

Core units

• select all of the units from this list

Unit code	Unit title	
MEM12023A	Perform engineering measurements	
MEM12024A	Perform computations	
MEM13014A	Apply principles of occupational health and safety in the work environment	
MEM14004A	Plan to undertake a routine task	

MEM14005A	Plan a complete activity	
MEM15002A	Apply quality systems	
MEM15024A	Apply quality procedures	
MEM16006A	Organise and communicate information	
MEM16007A	Work with others in a manufacturing, engineering or related	
	environment	
MEM16008A	Interact with computing technology	
MEM17003A	Assist in the provision of on the job training	
MSAENV272B	Participate in environmentally sustainable work practices	

Elective Units

Group A - Mechanical Trade stream units

• select units from this list to the value of at least 40 points

Unit code	Unit title	Р
MEM07001B	Perform operational maintenance of	2
	machines/equipment	
MEM07002B	Perform precision	4
	shaping/planing/slotting operations	
MEM07003B	Perform machine setting (routine)	4
MEM07004B	Perform machine setting (complex)	8
MEM07005C	Perform general machining	8
MEM07006C	Perform lathe operations	4
MEM07007C	Perform milling operations	4
MEM07008D	Perform grinding operations	4
MEM07009B	Perform precision jig boring operations	4
MEM07010B	Perform tool and cutter grinding	4
	operations	
MEM07011B	Perform complex milling operations	4
MEM07012B	Perform complex grinding operations	4
MEM07013B	Perform machining operations using	4
	horizontal and/or vertical boring	
	machines	
MEM07014B	Perform electro-discharge (EDM)	4
	machining operations	
MEM07015B	Set computer controlled	2
	machines/processes	
MEM07016C	Set and edit computer controlled	4
	machines/processes	
MEM07018C	Write basic NC/CNC programs	4
MEM07019C	Program NC/CNC machining centre	2
MEM07020C	Program multiple spindle and/or	2
	multiple axis NC/CNC machining	
	centre	

MEM07021B	Perform complex lathe operations	4
MEM07022C	Program CNC wire cut machines	2
MEM07023C	Program and set up CNC	6
	manufacturing cell	
MEM07024B	Operate and monitor machine/process	4
MEM07025B	Perform advanced machine/process	6
	operation	
MEM07026B	Perform advanced plastic processing	6
MEM07027B	Perform advanced press operations	6
MEM07028B	Operate computer controlled	2
	machines/processes	
MEM07029B	Perform routine	4
	sharpening/maintenance of production	
	tools and cutters	
MEM07030C	Perform metal spinning lathe	8
	operations (basic)	
MEM07031C	Perform metal spinning lathe	4
	operations (complex)	
MEM07032B	Use workshop machines for basic	2
	operations	
MEM07033B	Operate and monitor basic boiler	6
MEM07034A	Operate and monitor intermediate	4
	class boiler	
MEM07040A	Set multistage integrated processes	6
MEM09002B	Interpret technical drawing	4
MEM09022A	Create 2D code files using computer	4
	aided manufacturing system	
MEM10004B	Enter and change programmable	2
	controller operational parameters	
MEM10006B	Install machine/plant	4
MEM12003B	Perform precision mechanical	2
	measurement	
MEM12006C	Mark off/out (general engineering)	4
MEM13007B	Maintain water treatment systems for	2
	cooling towers	
MEM18001C	Use hand tools	2
MEM18002B	Use power tools/hand held operations	2
MEM18003C	Use tools for precision work	4
MEM18004B	Maintain and overhaul mechanical	4
	equipment	
MEM18005B	Perform fault diagnosis, installation and	4
	removal of bearings	
MEM18006C	Repair and fit engineering components	6
MEM18007B	Maintain and repair mechanical drives	4
	and mechanical transmission	
	assemblies	

MEM18008B	Balance equipment	2
MEM18009B	Perform levelling and alignment of	4
	machines and engineering	
	components	
MEM18010C	Perform equipment condition	4
	monitoring and recording	
MEM18011C	Shut down and isolate	2
	machines/equipment	
MEM18012B	Perform installation and removal of	2
	mechanical seals	
MEM18013B	Perform gland packing	2
MEM18014B	Manufacture press tools and gauges	8
MEM18015B	Maintain tools and dies	4
MEM18018C	Maintain pneumatic system	4
	components	
MEM18019B	Maintain pneumatic systems	4
MEM18020B	Maintain hydraulic system components	4
MEM18021B	Maintain hydraulic systems	4
MEM18022B	Maintain fluid power controls	8
MEM18024B	Maintain engine cooling systems	2
MEM18025B	Service combustion engines	2
MEM18026C	Test compression ignition fuel systems	4
MEM18027C	Overhaul engine fuel system	8
	components	
MEM18028B	Maintain engine lubrication systems	2
MEM18029B	Tune diesel engines	4
MEM18030B	Diagnose and rectify low voltage	8
	electrical systems	
MEM18031B	Diagnose and rectify low voltage	2
	starting systems	
MEM18032B	Maintain induction/exhaust systems	4
MEM18033B	Perform engine bottom-end overhaul	4
MEM18034B	Perform engine top-end overhaul	8
MEM18035B	Diagnose and rectify braking systems	6
MEM18037B	Diagnose and rectify low voltage	2
	charging systems	
MEM18038B	Maintain wheels and tyres	2
MEM18039B	Diagnose and rectify track type	4
	undercarriage	
MEM18040B	Maintain suspension systems	4
MEM18041B	Maintain steering systems	4
MEM18042C	Diagnose and rectify manual	4
	transmissions	
MEM18043C	Diagnose and rectify automatic	8
	transmissions	

MEM18044C	Diagnose and rectify drive line and final drives	4
MEM18045B	Fault find/repair electrical equipment/components up to 250 volts single phase supply	4
MEM18046B	Fault find/repair electrical equipment/components up to 1000 volts a.c./1500 volts d.c.	10
MEM18047B	Diagnose and maintain electronic controlling systems on mobile plant	4
MEM18048B	Fault find and repair/rectify basic electrical circuits	12
MEM18049C	Disconnect/reconnect fixed wired equipment up to 1000 volts a.c./1500 volts d.c.	3
MEM18050C	Disconnect/reconnect fixed wired equipment over 1000 volts a.c./1500 volts d.c.	3
MEM18051B	Fault find and repair/rectify complex electrical circuits	6
MEM18052B	Maintain fluid power systems for mobile plant	4
MEM18054B	Fault find, test and calibrate instrumentation systems and equipment	8
MEM18055B	Dismantle, replace and assemble engineering components	3
MEM18056B	Diagnose and repair analog equipment and components	10
MEM18057B	Maintain/service analog/digital electronic equipment	6
MEM18058C	Modify electronic equipment	4
MEM18060B	Maintain, repair control instrumentation - single and multiple loop control systems	8
MEM18062B	Install, maintain and calibrate instrumentation sensors, transmitters and final control elements	8
MEM18063B	Terminate signal and data cables	4
MEM18064B	Maintain instrumentation system components	6
MEM18065B	Diagnose and repair digital equipment and components	10
MEM18066B	Diagnose and repair microprocessor- based equipment	6

MEM18067B	Tune control loops - multi controller or	6
=	multi element systems	
MEM18071B	Connect/disconnect fluid conveying	2
	system components	
MEM18072B	Manufacture fluid conveying conductor	4
	assemblies	
MEM18086B	Test, recover, evacuate and charge	4
	refrigeration systems	
MEM18087B	Service and repair domestic and light	6
	commercial refrigeration and air	
	conditioning equipment	
MEM18088B	Maintain and repair commercial air	4
	conditioning systems and components	
MEM18089B	Maintain and repair central air handling	6
	systems	
MEM18090B	Maintain and repair industrial	6
	refrigeration systems and components	
MEM18091B	Maintain and repair multi stage,	4
	cascade and/or ultra-cold industrial	
	refrigeration systems	
MEM18092B	Maintain and repair commercial and/or	6
IVILIVIIOUSED	industrial refrigeration and/or air	
	conditioning controls	
MEM18094B	Service and repair commercial	6
1VILIVI10034D	refrigeration	
MEM18095A	9	4
IVIEIVI 18095A	Maintain and repair cooling	4
	towers/evaporative condensers and	
N 45N 44000 CA	associated equipment	
MEM18096A	Maintain, repair/replace and adjust	6
	refrigerant flow controls and associated	
	equipment	
MEM18097A	Manufacture cavity dies	8
MEM18098A	Prepare to perform work associated	2
	with fuel system installation and	
	servicing*	

MEM30219 - Certificate III in Engineering - Mechanical Trade (Release 1)

Packaging Rules

To be awarded the MEM30219 Certificate III in Engineering - Mechanical Trade, units of competency to the value of 96 points must be achieved, chosen as outlined below:

- core units of competency listed below (totalling 33 points)
- elective units of competency to a minimum value of 40 points from Groups A, B and C electives as described below
- elective units of competency to a maximum value of 23 points from Group D to bring the total value to 96 points.

To be awarded the MEM30219 Certificate III in Engineering - Mechanical Trade (Machining), units of competency to the value of 96 points must be achieved, chosen as outlined below:

- core units of competency listed below (totalling 33 points)
- elective units of competency to a minimum value of 40 points from Group A electives as described below
- elective units of competency to a maximum value of 23 points from Group D to bring the total value to 96 points.

To be awarded the MEM30219 Certificate III in Engineering - Mechanical Trade (Fitting), units of competency to the value of 96 points must be achieved, chosen as outlined below:

- core units of competency listed below (totalling 33 points)
- elective units of competency to a minimum value of 40 points from Group B electives as described below
- elective units of competency to a maximum value of 23 points from Group D to bring the total value to 96 points.

To be awarded the MEM30219 Certificate III in Engineering - Mechanical Trade (Fitting/machining), units of competency to the value of 96 points must be achieved, chosen as outlined below:

- core units of competency listed below (totalling 33 points)
- elective units of competency to a minimum value of 40 points from Group C electives as described below
- elective units of competency to a maximum value of 23 points from Group D to bring the total value to 96 points.

Appropriate Group D elective units to the value of 8 points may be chosen from this Training Package, other endorsed Training Packages and accredited courses where those units are available for inclusion at Certificate III. Only select units that would be suitable for occupational outcomes in a mechanical trade 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	Р	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

- Packaging for a generic qualification choose a minimum value of 40 points in any combination from Groups A, B and C
- Packaging for a trade specialisation choose a minimum value of 40 points from **one of either** Group A or B or C

Group A – Machining Trade specialisation

Unit code	Unit title	Р	Prereq
MEM05005	Carry out mechanical cutting	2	*
MEM07005	Perform general machining	8	*
MEM07006	Perform lathe operations	4	*
MEM07007	Perform milling operations	4	*
MEM07008	Perform grinding operations	4	*
MEM07009	Perform precision jig boring operations	4	*
MEM07010	Perform tool and cutter grinding operations	4	*
MEM07011	Perform complex milling operations	4	*

MEM07012	Perform complex grinding operations	4	*
MEM07013	Perform machining operations using horizontal and vertical	4	*
	boring machines		
MEM07014	Perform electro-discharge machining (EDM) operations	4	*
MEM07015	Set computer controlled machines and processes	2	*
MEM12003	Perform precision mechanical measurement	2	*
MEM12006	Mark off/out (general engineering)	4	*
MEM18003	Use tools for precision work	4	*
MEM18055	Dismantle, replace and assemble engineering components	3	*

Group B - Fitting Trade specialisation

Unit code	Unit title	Р	Prereq
MEM05005	Carry out mechanical cutting	2	*
MEM07005	Perform general machining	8	*
MEM07006	Perform lathe operations	4	*
MEM10006	Install machine/plant	4	*
MEM12006	Mark off/out (general engineering)	4	*
MEM18003	Use tools for precision work	4	*
MEM18004	Maintain and overhaul mechanical equipment	4	*
MEM18005	Perform fault diagnosis, installation and removal of bearings	4	*
MEM18006	Perform precision fitting of engineering components	6	*
MEM18007	Maintain and repair mechanical drives and mechanical	4	*
	transmission assemblies		
MEM18008	Balance equipment	2	*
MEM18009	Perform precision levelling and alignment of machines and	4	*
	engineering components		
MEM18012	Perform installation and removal of mechanical seals	2	*
MEM18013	Perform gland packing	2	*
MEM18018	Maintain pneumatic system components	4	*
MEM18020	Maintain hydraulic system components	4	*
MEM18055	Dismantle, replace and assemble engineering components	3	*

Group C - Fitting/Machining Trade specialisation

Unit code	Unit title	Р	Prereq
MEM05005	Carry out mechanical cutting	2	*
MEM07005	Perform general machining	8	*
MEM07006	Perform lathe operations	4	*
MEM07007	Perform milling operations	4	*
MEM07008	Perform grinding operations	4	*
MEM07010	Perform tool and cutter grinding operations	4	*
MEM07013	Perform machining operations using horizontal and vertical	4	*
	boring machines		
MEM07014	Perform electro-discharge machining (EDM) operations	4	*
MEM07015	Set computer controlled machines and processes	2	*

MEM10006	Install machine/plant	4	*
MEM12003	Perform precision mechanical measurement	2	*
MEM12006	Mark off/out (general engineering)	4	*
MEM18003	Use tools for precision work	4	*
MEM18005	Perform fault diagnosis, installation and removal of bearings	4	*
MEM18006	Perform precision fitting of engineering components	6	*
MEM18007	Maintain and repair mechanical drives and mechanical	4	*
	transmission assemblies		
MEM18008	Balance equipment	2	*
MEM18009	Perform precision levelling and alignment of machines and	4	*
	engineering components		
MEM18012	Perform installation and removal of mechanical seals	2	*
MEM18013	Perform gland packing	2	*
MEM18018	Maintain pneumatic system components	4	*
MEM18020	Maintain hydraulic system components	4	*
MEM18055	Dismantle, replace and assemble engineering components	3	*

Group D – General electives

Unit code	Unit title	Р	Prereq
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	*
MEM05012	Perform routine manual metal arc welding	2	*
MEM05041	Weld using flame powder spraying	4	*
MEM05049	Perform routine gas tungsten arc welding	2	*
MEM05050	Perform routine gas metal arc welding	2	*
MEM06007	Perform basic incidental heat/quenching, tempering and	2	*
	annealing		
MEM07002	Perform precision shaping/planing/slotting operations	4	*
MEM07005	Perform general machining	8	*
MEM07006	Perform lathe operations	4	*
MEM07007	Perform milling operations	4	*
MEM07008	Perform grinding operations	4	*
MEM07009	Perform precision jig boring operations	4	*
MEM07010	Perform tool and cutter grinding operations	4	*
MEM07011	Perform complex milling operations	4	*
MEM07012	Perform complex grinding operations	4	*
MEM07013	Perform machining operations using horizontal and vertical	4	*
	boring machines		
MEM07014	Perform electro-discharge machining (EDM) operations	4	*
MEM07015	Set computer controlled machines and processes	2	*
MEM07016	Set and edit computer controlled machines and processes	4	*
MEM07021	Perform complex lathe operations	4	*
MEM07030	Perform basic metal spinning lathe operations	8	*

MEM07031	Perform complex metal spinning lathe operations	4	*
MEM07032	Use workshop machines for basic operations	2	*
MEM07040	Set multistage integrated processes	6	*
MEM08010	Manually finish/polish materials	6	*
MEM08011	Prepare surfaces using solvents and/or mechanical means	2	*
MEM08014	Apply protective coatings (basic)	4	*
MEM09003	Prepare basic engineering drawing	8	*
MEM09011	Apply basic engineering design concepts	6	*
MEM10002	Terminate and connect electrical wiring	3	*
MEM10004	Enter and change programmable controller operational	2	*
	parameters		
MEM10005	Commission programmable controller programs	4	*
MEM10006	Install machine/plant	4	*
MEM10010	Install pipework and pipework assemblies	4	*
MEM11010	Operate mobile load shifting equipment	4	*
MEM11016	Order materials	2	*
MEM11022	Operate fixed/moveable load shifting equipment	4	*
MEM12002	Perform electrical/electronic measurement	2	*
MEM12003	Perform precision mechanical measurement	2	*
MEM12006	Mark off/out (general engineering)	4	*
MEM12019	Measure components using coordinate measuring machines	4	*
MEM12020	Set and operate coordinate measuring machines	2	*
MEM13001	Perform emergency first aid	1	*
MEM13002	Undertake work health and safety activities in the workplace	3	*
MEM13003	Work safely with industrial chemicals and materials	2	*
MEM15001	Perform basic statistical quality control	2	*
MEM15003	Use improvement processes in team activities	4	*
MEM15004	Perform inspection	2	*
MEM16005	Operate as a team member to conduct manufacturing,	2	*
	engineering or related activities		
MEM18003	Use tools for precision work	4	*
MEM18004	Maintain and overhaul mechanical equipment	4	*
MEM18005	Perform fault diagnosis, installation and removal of bearings	4	*
MEM18006	Perform precision fitting of engineering components	6	*
MEM18007	Maintain and repair mechanical drives and mechanical	4	*
	transmission assemblies		
MEM18008	Balance equipment	2	*
MEM18009	Perform precision levelling and alignment of machines and	4	*
	engineering components		
MEM18010	Perform equipment condition monitoring and recording	4	*
MEM18011	Shut down and isolate machines/equipment	2	*
MEM18012			1
	Perform installation and removal of mechanical seals	2	*
MEM18013	Perform installation and removal of mechanical seals Perform gland packing	2	*

MEM18049	Disconnect/reconnect fixed wired equipment up to 1000 volts	3	*
	a.c./1500 volts d.c.		
MEM18055	Dismantle, replace and assemble engineering components	3	*
MEM24001B	Perform basic penetrant testing	2	*
MEM24003B	Perform basic magnetic particle testing	2	*
MEM24005B	Perform basic eddy current testing	2	*
MEM24007B	Perform ultrasonic thickness testing	2	*
MSMENV472	Implement and monitor environmentally sustainable work	4	
	practices		
TLILIC0003	Licence to operate a forklift truck	0	
TLILIC0002	Licence to operate a vehicle loading crane (capacity 10 metre	1	
	tonnes and above)		

MEM30919 - Certificate III in Boating Services (Release 1)

Packaging Rules

To be awarded the MEM30919 Certificate III in Boating Services a total of nineteen (19) units of competency units of competency must be achieved, chosen as outlined below:

- six (6) core units of competency listed below
- a minimum of thirteen (13) elective units of competency from Group A.

Up to four (4) appropriate elective units may be chosen from this Training Package, other endorsed Training Packages and accredited courses where those units are available for inclusion at Certificate III. Only select units that would be suitable for occupational outcomes in a boating services environment.

Prerequisites

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	Prereq
MEM13015	Work safely and effectively in manufacturing and	
	engineering	
MEM16006	Organise and communicate information	*
MEM50001	Classify recreational boating technologies and features	*
MEM50002	Work safely on marine craft	*
MEM50003	Follow work procedures to maintain the marine environment	*
MSMENV272	Participate in environmentally sustainable work practices	

Elective units of competency

Group A

Unit code	Unit title	Prereq
MEM04018	Perform general woodworking machine operations	*
MEM05003	Perform soft soldering	*
MEM05005	Carry out mechanical cutting	*
MEM05007	Perform manual heating and thermal cutting	*
MEM05012	Perform routine manual metal arc welding	*
MEM05050	Perform routine gas metal arc welding	*
MEM09002	Interpret technical drawing	*
MEM11010	Operate mobile load shifting equipment	*
MEM11011	Undertake manual handling	*
MEM12006	Mark off/out (general engineering)	*
MEM12007	Mark off/out structural fabrications and shapes	*

MEM12023	Perform engineering measurements	*
MEM12024	Perform computations	*
MEM13003	Work safely with industrial chemicals and materials	*
MEM14006	Plan work activities	*
MEM18001	Use hand tools	*
MEM18002	Use power tools/hand held operations	*
MEM25001	Apply fibre-reinforced materials	*
MEM25004	Fair and shape surfaces	*
MEM25007	Maintain marine vessel surfaces	*
MEM50004	Maintain quality of environment by following marina codes	*
MEM50005	Refuel vessels	*
MEM50006	Check operational capability of marine craft	*
MEM50007	Check operational capability of sails and sail operating	*
	equipment	
MEM50008	Carry out trip preparation and planning	*
MEM50009	Safely operate a mechanically powered recreational boat	*
MEM50010	Respond to boating emergencies and incidents	*
TLILIC0002	Licence to operate a vehicle loading crane (capacity 10 metre	
	tones and above)	
TLILIC0003	Licence to operate a forklift truck	

MEM30719 - Certificate III in Marine Craft Construction (Release 1)

Packaging Rules

To be awarded the MEM30719 Certificate III in Marine Craft Construction units of competency to a value of 96 points must be achieved, chosen as outlined below:

- core units of competency listed below (totalling 33 points)
- elective units of competency to a minimum value of 40 points from Group A
- elective units of competency to a maximum value of 23 points from Group B electives to bring the total value to 96 points.

Appropriate Group B elective units to the value of 8 points may be chosen from this Training Package, other endorsed Training Packages and accredited courses where those units are available for inclusion at Certificate III. Only select units that would be suitable for occupational outcomes in a marine craft construction trade 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	Р	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

Unit code	Unit title	Р	Prereq
MEM04018	Perform general woodworking machine operations	4	*
MEM07001	Perform operational maintenance of machines/equipment	2	*
MEM07024	Operate and monitor machine and process	4	*
MEM08002	Pre-treat work for subsequent surface coating	4	*
MEM08011	Prepare surfaces using solvents and/or mechanical means	2	*
MEM08014	Apply protective coatings (basic)	4	*
MEM09021	Interpret and produce drawings of curved 3-D shapes	4	*
MEM12007	Mark off/out structural fabrications and shapes	4	*
MEM13003	Work safely with industrial chemicals and materials	2	*
MEM13004	Work safely with molten metals/glass	2	*
MEM25001	Apply fibre-reinforced materials	2	*
MEM25002	Form and integrate fibre-reinforced structures	4	*
MEM25003	Set up marine vessel structures	4	*
MEM25004	Fair and shape surfaces	2	*
MEM25005	Construct and assemble marine vessel timber components	8	*
MEM25006	Undertake marine sheathing operations	2	*
MEM25007	Maintain marine vessel surfaces	4	*
MEM25008	Repair marine vessel surfaces and structures	4	*
MEM25009	Form timber shapes using hot processes	2	*
MEM25010	Perform fitout procedures	4	*
MEM25011	Install marine systems	8	*
MEM25012	Install and test operations of marine auxiliary systems	6	*
MEM25013	Produce three-dimensional plugs/moulds	12	*
MEM25014	Perform marine slipping operations	2	*
MEM25015	Assemble and install equipment and accessories/ancillaries	2	*
MEM50002	Work safely on marine craft	1	*
MEM50003	Follow work procedures to maintain the marine environment	1	*
MEM50004	Maintain quality of environment by following marina codes	1	*
MEM50009	Safely operate a mechanically powered recreational boat	2	*

Group B

Unit code	Unit title	Р	Prereq
MEM03002	Perform precision assembly	4	*
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	*
MEM05049	Perform routine gas tungsten arc welding	2	*
MEM05050	Perform routine gas metal arc welding	2	*

MEM08004	Finish work using wet, dry and vapour deposition methods	4	*
MEM09003	Prepare basic engineering drawing		*
MEM09009	Create 2-D drawings using computer-aided design system	8	*
MEM10006	Install machine/plant	4	*
MEM11001	Erect/dismantle scaffolding and equipment	4	*
MEM11010	Operate mobile load shifting equipment	4	*
MEM11022	Operate fixed/moveable load shifting equipment	4	*
MEM12001	Use comparison and basic measuring devices	2	*
MEM13001	Perform emergency first aid	1	*
MEM13002	Undertake work health and safety activities in the workplace	3	*
MEM15004	Perform inspection	2	*
MEM16004	Perform internal/external customer service		*
MEM16005	Operate as a team member to conduct manufacturing,	2	*
	engineering or related activities		
MEM18003	Use tools for precision work	4	*
MEM18006	Perform precision fitting of engineering components	6	*
MEM18009	Perform precision levelling and alignment of machines and	4	*
	engineering components		
MEM18055	Dismantle, replace and assemble engineering components	3	*
MEM26001	Lay up composites using open moulding techniques	6	*
MEM26006	Mark and cut out sheets for composite use		*
MEM26007	Select and use reinforcing appropriate for product	4	*
MEM26008	Select and use resin systems appropriate for product	4	*
MEM26009	Select and use cores and fillers appropriate for product	2	*
MEM26010	Store and handle composite materials	2	*

MEM40105 - Certificate IV in Engineering (Release 4)

Packaging Rules

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

- completion of all core units of competency listed below, and
- completion of units from the Group A Specialisation electives listed below to the value of at least 12 points, and
- completion of Group B electives listed below to bring the total value to at least 109 points.

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

Appropriate Group B elective units to the value of 22 points may be chosen from other endorsed Training Packages and accredited courses where those units are available for inclusion at Certificate IV. Note that the elective units listed below include all of the units that are approved for selection from the MEM Training Package for use in this 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.

Additional qualification descriptors

The following additional descriptors are approved for use with this qualification:

Refrigeration and Air Conditioning; Casting and Moulding; CNC programming; Fluid Power; Heavy Fabrication; Instrumentation; Maintenance; Marine Electronics; Mechatronics; Patternmaking; Robotics; Toolmaking; Welding, Watch and Clock Service and Repair.

Core Units

• select all of the units from this list

Unit code	Unit title
MEM12023A	Perform engineering measurements
MEM12024A	Perform computations
MEM13014A	Apply principles of occupational health and safety in the work environment
MEM14004A	Plan to undertake a routine task
MEM14005A	Plan a complete activity
MEM15024A	Apply quality procedures
MEM15002A	Apply quality systems
MEM16006A	Organise and communicate information
MEM16007A	Work with others in a manufacturing, engineering or related environment

MEM16008A	Interact with computing technology
MEM17003A	Assist in the provision of on the job training
MSAENV272B	Participate in environmentally sustainable work practices

Electives

Group A - Specialisation units

• select units from this list to a value of at least 12 points and up to a maximum of 109 points

Unit code	Unit title	Р
MEM04020A	Supervise individual ferrous melting	4
	and casting operation	
MEM04021A	Supervise individual non ferrous	4
	melting and casting operation	
MEM04022A	Examine appropriateness of	4
	methoding for mould design	
MEM04023A	Undertake prescribed tests on	4
	foundry related materials	
MEM05024B	Perform welding supervision	12
MEM05025C	Perform welding/fabrication	12
	inspection	
MEM05026C	Apply welding principles	4
MEM05042B	Perform welds to code standards	6
	using flux core arc welding process	
MEM05043B	Perform welds to code standards	6
	using gas metal arc welding process	
MEM05044B	Perform welds to code standards	6
	using gas tungsten arc welding	
	process	
MEM05045B	Perform pipe welds to code	6
	standards using manual metal arc	
	welding process	
MEM05046B	Perform welds to code standards	6
	using manual metal arc welding	
	process	
MEM05053A	Set and edit computer controlled	4
	thermal cutting machines	
MEM05054A	Write basic NC/CNC programs for	4
	thermal cutting machines	
MEM07016C	Set and edit computer controlled	4
	machines/processes	
MEM07018C	Write basic NC/CNC programs	4
MEM07019C	Program NC/CNC machining centre	2
MEM07020C	Program multiple spindle and/or	2
	multiple axis NC/CNC machining	
	centre	

MEM07022C	Program CNC wire cut machines	2
MEM07023C	Program and set up CNC	6
	manufacturing cell	
MEM07039A	Write programs for industrial robots	4
MEM09004B	Perform electrical/electronic detail	8
	drafting	
MEM09006B	Perform advanced engineering detail	4
	drafting	
MEM09007B	Perform advanced mechanical detail	4
	drafting	
MEM09008B	Perform advanced structural detail	4
	drafting	
MEM09009C	Create 2D drawings using computer	8
	aided design system	
MEM09010C	Create 3D models using computer	4
	aided design system	
MEM09023A	Create 3D code files using computer	6
	aided manufacturing system	
MEM10007C	Modify control systems	6
MEM10008B	Undertake commissioning	4
1112111100000	procedures for plant and/or	
	equipment	
MEM12003B	Perform precision mechanical	2
WEWILOUSE	measurement	
MEM12004B	Perform precision	4
TVIEIVII200 IB	electrical/electronic measurement	
MEM12005B	Calibrate measuring equipment	6
MEM12025A	Use graphical techniques and	2
TVIETVITE OE ST	perform simple statistical	
	computations	
MEM14001B	Schedule material deliveries	8
MEM14002B	Undertake basic process planning	8
MEM14003B	Undertake basic production	8
WEWITHOUSE	scheduling	
MEM15007B	Conduct product and/or process	6
IVIEIVITOUTD	capability studies	O
MEM15008B		2
IVIEIVIIJUUOD	Perform advanced statistical quality control	2
N 4 F N 41 F O1 O D		8
MEM15010B	Perform laboratory procedures	
MEM15011B	Exercise external quality assurance	6
MEM15012B	Maintain/supervise application of	4
N 4 E N 41 E O1 E D	quality procedures	 r
MEM15015B	Examine trading practices	5
MEM15016B	Inspect pre-packed articles	8
MEM15017B	Use and maintain reference	3
	standards	

MEM15018B	Investigate consumer complaints	6
MEM15019B	Conduct a field inspection	12
MEM15020C	Perform verification/certification or	12
	in-service inspection	
MEM15021C	Conduct audits of servicing licensees	4
	and public weighbridge licensees	
MEM15022B	Verify reference standards	8
MEM16001B	Give formal presentations and take	2
	part in meetings	
MEM16003B	Provide advanced customer service	2
MEM16009A	Research and analyse engineering	2
	information	
MEM16010A	Write reports	2
MEM16011A	Communicate with individuals and	2
	small groups	
MEM16012A	Interpret technical specifications and	4
	manuals	
MEM16013A	Operate in a self-directed team	2
MEM16014A	Report technical information	2
MEM17001B	Assist in development and deliver	2
	training in the workplace	
MEM17002B	Conduct workplace assessment	2
MEM18010C	Perform equipment condition	4
	monitoring and recording	
MEM18011C	Shut down and isolate	2
	machines/equipment	
MEM18016B	Analyse plant and equipment	4
	condition monitoring results	
MEM18017C	Modify mechanical systems and	8
	equipment	
MEM18019B	Maintain pneumatic systems	4
MEM18021B	Maintain hydraulic systems	4
MEM18022B	Maintain fluid power controls	8
MEM18023B	Modify fluid power system operation	8
MEM18049C	Disconnect/reconnect fixed wired	3
	equipment up to 1000 volts a.c./1500	
	volts d.c.	
MEM18050C	Disconnect/reconnect fixed wired	3
	equipment over 1000 volts a.c./1500	
	volts d.c.	
MEM18051B	Fault find and repair/rectify complex	6
-	electrical circuits	
MEM18053B	Modify fluid power control systems	6
MEM18054B	Fault find, test and calibrate	8
- -	instrumentation systems and	
	equipment	

MEM18056B	Diagnose and repair analog	10
	equipment and components	
MEM18058C	Modify electronic equipment	4
MEM18059B	Modify electronic systems	4
MEM18060B	Maintain, repair control	8
	instrumentation - single and multiple	
	loop control systems	
MEM18061B	Maintain/calibrate complex control	8
	systems	
MEM18062B	Install, maintain and calibrate	8
	instrumentation sensors, transmitters	
	and final control elements	
MEM18065B	Diagnose and repair digital	10
	equipment and components	
MEM18066B	Diagnose and repair microprocessor-	6
	based equipment	
MEM18067B	Tune control loops - multi controller	6
	or multi element systems	
MEM18069B	Maintain, repair instrumentation	6
	process control analysers	
MEM18070C	Modify complex electrical circuits and	6
1.451.440.070.4	systems	
MEM18073A	Perform advanced equipment testing	8
	and diagnostics on mobile plant and	
NATN 410001D	equipment	4
MEM18091B	Maintain and repair multi stage, cascade and/or ultra-cold industrial	4
	refrigeration systems	
MEM18092B	Maintain and repair commercial	6
IVIEIVITOU9ZD	and/or industrial refrigeration and/or	O
	air conditioning controls	
MEM18093B	Maintain and repair integrated	8
IVILIVIIOO93D	industrial refrigeration and/or large	
	air handling system controls	
MEM18098A	Prepare to perform work associated	2
	with fuel system installation and	
	servicing*	
MEM19008B	Prepare jewellery designs	6
MEM19013B	Produce jewellery metal masters	4
MEM19018B	Repair jewellery items	6
MEM19022B	Perform precision micro-mechanism	6
	diagnosis and servicing	
MEM20008A	Develop and implement a masterkey	6
	system	
MEM20011A	Service and repair fire and security	6
	containers	

Service and repair mechanical automotive locking systems	4
Service automotive transponder	2
Service clock escapements and	4
Service and repair clock striking mechanisms	4
Service and repair clock chiming mechanisms	6
Restore clockwork mechanisms	6
Manufacture watch and clock components	6
Plan, set up and operate horological workshop or service centre	4
Perform penetrant testing	4
Perform magnetic particle testing	4
Perform eddy current testing	6
Perform ultrasonic testing	6
Perform radiographic testing	6
Establish non-destructive tests	12
Apply metallurgy principles	4
Repair marine vessel surfaces and structures	4
Produce three-dimensional plugs/moulds	12
Apply mathematical techniques in a manufacturing, engineering or related environment	4
Analyse a simple electrical system circuit	4
Interpret binary phase diagrams	4
	automotive locking systems Service automotive transponder systems Service clock escapements and oscillating systems Service and repair clock striking mechanisms Service and repair clock chiming mechanisms Restore clockwork mechanisms Manufacture watch and clock components Plan, set up and operate horological workshop or service centre Perform penetrant testing Perform adjustic particle testing Perform eddy current testing Perform ultrasonic testing Perform radiographic testing Perform radiographic testing Establish non-destructive tests Apply metallurgy principles Repair marine vessel surfaces and structures Produce three-dimensional plugs/moulds Apply mathematical techniques in a manufacturing, engineering or related environment Analyse a simple electrical system circuit

Group B - elective units

• select units from this group to bring the total value of Group A and B units to 109 points, including any prerequisites.

Unit code	Unit title	Р
AURVTN2002	Carry out panel repairs	4
BSBOHS502A	Participate in the management of the	2
	OHS information and data systems	
BSBOHS601A	Develop a systematic approach to	4
	managing OHS	

Develop OHS information and data	2
·	_
	4
	6
	6
,	
,	6
'	
	4
Perform manual production assembly	4
Perform precision assembly	4
Perform sheet and plate assembly	4
Perform electronic/electrical assembly	8
(production)	
Rework and repair	8
'	
·	2
,	4
•	2
	4
	4
	7
3	16
-	10
9 5/	8
	O
3	4
	4
	4
	20
	20
-	
	8
<u> </u>	8
· ·	2
	8
patterns	
Develop and manufacture vacuum	6
forming moulds and associated	
equipment	
Develop and manufacture precision	6
models	
	Perform sheet and plate assembly Perform electronic/electrical assembly (production) Rework and repair (electrical/electronic production) Set assembly stations Operate melting furnaces Perform gravity die casting machine Prepare and mix sand for metal moulding Produce moulds and cores by hand (jobbing) Operate sand moulding and core making machines Pour molten metal Fettle and trim metal castings/forgings Develop and manufacture wood patterns Produce polymer patterns Assemble plated patterns Develop and manufacture production patterns Develop and manufacture vacuum forming moulds and associated equipment Develop and manufacture precision

MEM04017B	Davidon and manufacture goar	4
IVIEIVIU4017B	Develop and manufacture gear,	4
	conveyor screw and propeller	
NATA 40 4010 D	patterns	
MEM04018B	Perform general woodworking	4
	machine operations	
MEM04019B	Perform refractory installation and	4
	repair	
MEM05001B	Perform manual	4
	soldering/desoldering -	
	electrical/electronic components	
MEM05002B	Perform high reliability soldering and	4
	desoldering	
MEM05003B	Perform soft soldering	2
MEM05004C	Perform routine oxy acetylene	2
	welding	
MEM05005B	Carry out mechanical cutting	2
MEM05006C	Perform brazing and/or silver	2
	soldering	
MEM05007C	Perform manual heating and thermal	2
	cutting	
MEM05008C	Perform advanced manual thermal	2
WEW 63000	cutting, gouging and shaping	
MEM05009C	Perform automated thermal cutting	2
MEM05010C	Apply fabrication, forming and	8
WEWOOO	shaping techniques	
MEM05011D	Assemble fabricated components	8
MEM05012C	Perform routine manual metal arc	2
IVILIVIOJO IZC	welding	
MEM05013C	3	2
	Perform manual production welding	2
MEM05014C	Monitor quality of production	2
NATA 405015D	welding/fabrications	1
MEM05015D	Weld using manual metal arc welding	4
N. 45 N. 40 F. 04 G. C.	process	
MEM05016C	Perform advanced welding using	4
	manual metal arc welding process	
MEM05017D	Weld using gas metal arc welding	4
	process	
MEM05018C	Perform advanced welding using gas	4
	metal arc welding process	
MEM05019D	Weld using gas tungsten arc welding	4
	process	
MEM05020C	Perform advanced welding using gas	4
	tungsten arc welding process	
MEM05022C	Perform advanced welding using oxy	6
	acetylene welding process	

MEM05023C	Weld using submerged arc welding	4
	process	
MEM05036C	Repair/replace/modify fabrications	4
MEM05037C	Perform geometric development	6
MEM05038B	Perform advanced geometric	2
	development - cylindrical/rectangular	
MEM05039B	Perform advanced geometric	2
	development - conical	
MEM05040B	Perform advanced geometric	4
	development - transitions	
MEM05041B	Weld using powder flame spraying	4
MEM05047B	Weld using flux core arc welding	4
	process	
MEM05048B	Perform advanced welding using flux	4
	core arc welding process	
MEM05049B	Perform routine gas tungsten arc	2
	welding	
MEM05050B	Perform routine gas metal arc	2
	welding	
MEM05051A	Select welding processes	2
MEM05052A	Apply safe welding practices	4
MEM06001B	Perform hand forging	4
MEM06002B	Perform hammer forging	4
MEM06003C	Carry out heat treatment	6
MEM06004B	Select heat treatment processes and	6
	test finished product	
MEM06005B	Perform drop and upset forging	4
MEM06006C	Repair springs	4
MEM06007B	Perform basic incidental	2
	heat/quenching, tempering and	
	annealing	
MEM06008A	Hammer forge complex shapes	4
MEM06009A	Hand forge complex shapes	4
MEM07001B	Perform operational maintenance of	2
	machines/equipment	
MEM07002B	Perform precision	4
	shaping/planing/slotting operations	
MEM07003B	Perform machine setting (routine)	4
MEM07004B	Perform machine setting (complex)	8
MEM07005C	Perform general machining	8
MEM07006C	Perform lathe operations	4
MEM07007C	Perform milling operations	4
MEM07008D	Perform grinding operations	4
MEM07009B	Perform precision jig boring	4
	operations	

MEM07010B	Perform tool and cutter grinding	4
	operations	
MEM07011B	Perform complex milling operations	4
MEM07012B	Perform complex grinding operations	4
MEM07013B	Perform machining operations using	4
	horizontal and/or vertical boring	
	machines	
MEM07014B	Perform electro-discharge (EDM)	4
	machining operations	
MEM07015B	Set computer controlled	2
	machines/processes	
MEM07021B	Perform complex lathe operations	4
MEM07024B	Operate and monitor	4
	machine/process	
MEM07025B	Perform advanced machine/process or	peration
MEM07026B	Perform advanced plastic processing	6
MEM07027B	Perform advanced press operations	6
MEM07028B	Operate computer controlled	2
	machines/processes	
MEM07029B	Perform routine	4
	sharpening/maintenance of	
	production tools and cutters	
MEM07030C	Perform metal spinning lathe	8
	operations (basic)	
MEM07031C	Perform metal spinning lathe	4
	operations (complex)	
MEM07032B	Use workshop machines for basic	2
	operations	
MEM07033B	Operate and monitor basic boiler	6
MEM07034A	Operate and monitor intermediate	4
	class boiler	
MEM07040A	Set multistage integrated processes	6
MEM08001B	Perform wire, jig and barrel	4
	load/unload work	
MEM08002C	Pre-treat work for subsequent surface	4
	coating	
MEM08003C	Perform electroplating operations	6
MEM08004B	Finish work using wet, dry and vapour	4
TVIETVIOCOU IB	deposition methods	
MEM08005B	Prepare and produce specialised	4
1112111000000	coatings	'
MEM08006B	Produce clear and/or coloured	2
1412141000000	and/or sealed anodised films on	_
	aluminium	
MEM08007B	Control surface finish production and	4
IVILIVIOUOUID	finished product quality	
	ministred product quality	

MEM08008B	Operate and control surface finishing waste treatment process	3
MEM08009C	Make up solutions	2
MEM08010B		6
	Manually finish/polish materials	
MEM08011B	Prepare surfaces using solvents	2
14F1 100012D	and/or mechanical means	4
MEM08012B	Prepare surfaces by abrasive blasting	4
1 (E) (00010B	(basic)	
MEM08013B	Prepare surfaces by abrasive blasting	4
	(advanced)	
MEM08014B	Apply protective coatings (basic)	4
MEM08015B	Apply protective coatings (advanced)	4
MEM08016B	Control blast coating by-products,	1
	materials and emissions	
MEM08018B	Electroplate engineering coatings	6
MEM08019B	Electroplate protective finishes	6
MEM08020B	Electroplate decorative finishes	6
MEM09002B	Interpret technical drawing	4
MEM09003B	Prepare basic engineering drawing	8
MEM09005B	Perform basic engineering detail	8
IVILIVIOSOOSD	drafting	
MEM09011B	3	6
IVIEIVIU9UTID	Apply basic engineering design	O
NATN 400021D	concepts	4
MEM09021B	Interpret and produce curved 3-	4
1 4F1 400000 A	dimensional shapes	
MEM09022A	Create 2D code files using computer	4
=	aided manufacturing system	
MEM10001C	Erect structures	4
MEM10002B	Terminate and connect electrical	3
	wiring	
MEM10003B	Install and test electrical wiring and	12
	circuits up to 1000 volts a.c. and 1500	
	volts d.c.	
MEM10004B	Enter and change programmable	2
	controller operational parameters	
MEM10005B	Commission programmable	4
	controller programs	
MEM10006B	Install machine/plant	4
MEM10009B	Install refrigeration and air	4
	conditioning plant and equipment	
MEM10010B	Install pipework and pipework	4
	assemblies	
MEM10011B	Terminate and connect specialist	3
THE INTO THE	cables	
MEM10013A	Install split air conditioning systems	6
IVILIVITOUTSA	and associated pipework	U
	and associated pipework	

MEM11001C	Erect/dismantle scaffolding and	4
IVILIVIIIOOIC	equipment	
MEM11002C	Erect/dismantle complex scaffolding	4
IVILIVITIOOZC	and equipment	
MEM11003B	Coordinate erection/dismantling of	4
IVILIVITIOOSD	complex scaffolding/equipment	
MEM11004B	Undertake dogging	4
MEM11005B	Pick and process order	4
MEM11003B	'	2
MEM11000B	Perform production packaging	4
	Administer inventory procedures	
MEM11008B	Package materials (stores and	2
A F A 411000 D	warehouse)	4
MEM11009B	Handle/move bulk fluids/gases	4
MEM11010B	Operate mobile load shifting	4
=	equipment	
MEM11011B	Undertake manual handling	2
MEM11012B	Purchase materials	6
MEM11013B	Undertake warehouse receival	4
	process	
MEM11014B	Undertake warehouse dispatch	4
	process	
MEM11015B	Manage warehouse inventory system	6
MEM11016B	Order materials	2
MEM11017B	Organise and lead stocktakes	4
MEM11018B	Organise and maintain warehouse	6
	stock receival and/or dispatch system	
MEM11019B	Undertake tool store procedures	4
MEM11020B	Perform advanced warehouse	4
	computer operations	
MEM11021B	Perform advanced operation of load	2
	shifting equipment	
MEM11022B	Operate fixed/moveable load shifting	4
	equipment	
MEM12001B	Use comparison and basic measuring	2
	devices	
MEM12002B	Perform electrical/electronic	2
111211120025	measurement	
MEM12006C	Mark off/out (general engineering)	4
MEM12007D	Mark off/out structural fabrications	4
	and shapes	
MEM12019B	Measure components using	4
	coordinate measuring machine	
MEM12020B	Set and operate coordinate	2
IVILIVIIZUZUD	· ·	<u></u>
N 4 E N 412 O 21 D	measuring machine	4
MEM12021B	Program coordinate measuring	4
	machine	

F <u></u>	T =	Т -
MEM12022B	Program coordinate measuring	2
NATN 412 0 0 1 D	machine (advanced)	1
MEM13001B	Perform emergency first aid	1
MEM13002B	Undertake occupational health and	3
N 4 EN 412 O O 2 D	safety activities in the workplace	2
MEM13003B	Work safely with industrial chemicals	2
N 4 E N 412 O O 4 D	and materials	2
MEM13004B	Work safely with molten metals/glass	2
MEM13006B	Collect and evaluate occupational	4
	health and safety data for an	
MEM13007B	enterprise or section of an enterprise	2
IVIEIVI 13007 D	Maintain water treatment systems for	
N 4 E N 412 O 1 O A	cooling towers	4
MEM13010A	Supervise occupational health and	4
	safety in an industrial work environment.	
N 4 E N 412 O 12 D		4
MEM13013B	Work safely with ionizing radiation	
MEM15001B	Perform basic statistical quality	2
N 4 E N 41 E O O O D	control	4
MEM15003B	Use improvement processes in team activities	4
MEM15004B		2
	Perform inspection	4
MEM15005B	Select and control inspection	4
MEM16002C	processes and procedures Conduct formal interviews and	4
IVIEIVIIOUUZC	negotiations	4
MEM16004B	Perform internal/external customer	2
IVIEIVI 10004D	service	2
MEM16005A	Operate as a team member to	2
MILIMITOUUJA	conduct manufacturing, engineering	
	or related activities	
MEM18001C	Use hand tools	2
MEM18002B	Use power tools/hand held	2
IVILIVITOOOZD	operations	_
MEM18003C	Use tools for precision work	4
MEM18004B	Maintain and overhaul mechanical	4
IVILIVI1000+D	equipment	7
MEM18005B	Perform fault diagnosis, installation	4
2.111100000	and removal of bearings	
MEM18006C	Repair and fit engineering	6
	components	
MEM18007B	Maintain and repair mechanical	4
550.5	drives and mechanical transmission	
	assemblies	
MEM18008B	Balance equipment	2
	Daiance equipment	1-

MEM18009B	Perform levelling and alignment of	4
	machines and engineering	
	components	
MEM18012B	Perform installation and removal of	2
	mechanical seals	
MEM18013B	Perform gland packing	2
MEM18014B	Manufacture press tools and gauges	8
MEM18015B	Maintain tools and dies	4
MEM18018C	Maintain pneumatic system	4
	components	
MEM18020B	Maintain hydraulic system	4
	components	
MEM18024B	Maintain engine cooling systems	2
MEM18025B	Service combustion engines	2
MEM18026C	Test compression ignition fuel	4
	systems	
MEM18027C	Overhaul engine fuel system	8
	components	
MEM18028B	Maintain engine lubrication systems	2
MEM18029B	Tune diesel engines	4
MEM18030B	Diagnose and rectify low voltage	8
	electrical systems	
MEM18031B	Diagnose and rectify low voltage	2
	starting systems	
MEM18032B	Maintain induction/exhaust systems	4
MEM18033B	Perform engine bottom-end overhaul	4
MEM18034B	Perform engine top-end overhaul	8
MEM18035B	Diagnose and rectify braking systems	6
MEM18037B	Diagnose and rectify low voltage	2
	charging systems	
MEM18038B	Maintain wheels and tyres	2
MEM18039B	Diagnose and rectify track type	4
	undercarriage	
MEM18040B	Maintain suspension systems	4
MEM18041B	Maintain steering systems	4
MEM18042C	Diagnose and rectify manual	4
	transmissions	
MEM18043C	Diagnose and rectify automatic	8
	transmissions	
MEM18044C	Diagnose and rectify drive line and	4
	final drives	
MEM18045B	Fault find/repair electrical	4
	equipment/components up to 250	
	volts single phase supply	

MEM18046B	Fault find/repair electrical	10
IVILIVIIOOTOD	equipment/components up to 1000	
	volts a.c./1500 volts d.c.	
NAEN 4100 47D		4
MEM18047B	Diagnose and maintain electronic	4
MEN 4100 40D	controlling systems on mobile plant	12
MEM18048B	Fault find and repair/rectify basic	12
14514400505	electrical circuits	
MEM18052B	Maintain fluid power systems for	4
	mobile plant	
MEM18055B	Dismantle, replace and assemble	3
	engineering components	
MEM18057B	Maintain/service analog/digital	6
	electronic equipment	
MEM18063B	Terminate signal and data cables	4
MEM18064B	Maintain instrumentation system	6
	components	
MEM18071B	Connect/disconnect fluid conveying	2
	system components	
MEM18072B	Manufacture fluid conveying	4
IVILIVIIOO7 ZB	conductor assemblies	
MEM18084A	Commission and decommission split	4
IVIEIVI10004A	·	4
N 4 EN 410 O O E A	air conditioning systems	6
MEM18085A	Install, service and repair domestic air	0
	conditioning and refrigeration	
1.451.440.0.65	appliances	
MEM18086B	Test, recover, evacuate and charge	4
	refrigeration systems	
MEM18087B	Service and repair domestic and light	6
	commercial refrigeration and air	
	conditioning equipment	
MEM18088B	Maintain and repair commercial air	4
	conditioning systems and	
	components	
MEM18089B	Maintain and repair central air	6
	handling systems	
MEM18090B	Maintain and repair industrial	6
	refrigeration systems and	
	components	
MEM18094B	Service and repair commercial	6
	refrigeration	
MEM18095A	Maintain and repair cooling	4
141214110033/1	towers/evaporative condensers and	
	associated equipment	
MEM18096A	·	6
IVIEIVIIOUJUA	Maintain, repair/replace and adjust	U
	refrigerant flow controls and	
	associated equipment	

N 4EN 410007 A	Maranda atoma and its dia a	0
MEM18097A	Manufacture cavity dies	8
MEM19001B	Perform jewellery metal casting	6
MEM19002B	Prepare jewellery illustrations	4
MEM19003B	Handle gem materials	2
MEM19004B	Handle and examine gemstone	6
	materials	
MEM19005B	Produce three-dimensional precision	8
	items	
MEM19006B	Replace watch batteries	1
MEM19007B	Perform gemstone setting	6
MEM19009B	Perform investment procedures for	1
	lost wax casting process	
MEM19010B	Produce rubber moulds for lost wax	2
	casting process	
MEM19011B	Perform wax injection of moulds for	2
	lost wax casting process	
MEM19012B	Produce jewellery wax model	4
MEM19014B	Perform hand engraving	4
MEM19015B	Perform jewellery enamelling	4
MEM19016B	Construct jewellery components	4
MEM19017B	Fabricate jewellery items	6
MEM19020B	Fault-find and maintain micro-	4
IVIEIVI19020D	mechanisms	4
MEM19021B		6
IVIEIVI19UZID	Diagnose and service micro- mechanisms	O
MEM20001A		4
	Produce keys	
MEM20002A	Assemble and test lock mechanisms	6
MEM20003A	Install and upgrade locks and	4
N 45N 42000 4 A	hardware	4
MEM20004A	Gain entry	4
MEM20005A	Install and maintain door control	2
	devices/systems	
MEM20006A	Maintain and service mechanical	6
	locking devices	
MEM20007A	Plan and prepare a masterkey system	4
MEM20009A	Gain entry and reinstate fire and	4
	security containers	
MEM20010A	Gain entry and reinstate automotive	4
	locking systems	
MEM20014A	Perform a site security survey	2
MEM21001A	Replace watch batteries, capacitors	2
	and bands	
MEM21002A	Perform watch movement exchange *	2
MEM21003A	Perform watch case servicing, repair	4
	and refurbishment *	
MEM21004A	Clean watch and clock components	2
14121412100171	Cicari water and clock components	<u> </u>

MEM21005A	Diagnose faults in quartz watches *	2
MEM21006A	Service quartz watches *	4
MEM21007A	Service complex quartz watches	4
MEM21008A	Service mechanical watches	4
MEM21009A	Inspect, diagnose, adjust and repair	4
	mechanical watches	
MEM21010A	Service watch power generating	2
	systems	
MEM21011A	Service calendar and other dial	4
	indication mechanisms for watches	
MEM21012A	Service and repair mechanical watch	4
	oscillating systems	
MEM21013A	Service, test and adjust watch	4
	escapements	
MEM21014A	Service mechanical chronograph	6
	watches	
MEM21015A	Perform precision watch timing and	6
	adjustment	
MEM21016A	Install and set up clocks	2
MEM21017A	Service and repair clock timepieces	6
MEM24001B	Perform basic penetrant testing	2
MEM24003B	Perform basic magnetic particle	2
	testing	
MEM24005B	Perform basic eddy current testing	2
MEM24007B	Perform ultrasonic thickness testing	2
MEM24009B	Perform basic radiographic testing	2
MEM25001B	Apply fibre-reinforced materials	2
MEM25002B	Form and integrate fibre-reinforced	4
	structures	
MEM25003B	Set up marine vessel structures	4
MEM25004B	Fair and shape surfaces	2
MEM25005B	Construct and assemble marine	8
	vessel timber components	
MEM25006B	Undertake marine sheathing	2
	operations	
MEM25007B	Maintain marine vessel surfaces	4
MEM25009B	Form timber shapes using hot	2
	processes	
MEM25010B	Perform fitout procedures	4
MEM25011B	Install marine systems	8
MEM25012B	Install and test operations of marine	6
	auxiliary systems	
MEM25014B	Perform marine slipping operations	2
MEM25015A	Assemble and install equipment and	2
2233737	accessories/ancillaries	
MEM50002B	Work safely on marine craft	1

MEM50003B	Follow work procedures to maintain	1
	the marine environment	
MEM50004B	Maintain quality of environment by	1
	following marina codes	
MEM50009B	Safely operate a mechanically	2
	powered recreational boat	
MSAENV472B	Implement and monitor	4
	environmentally sustainable work	
	practices	
PMBPROD291B	Operate resin infusion moulding	2
	equipment	
PMBPROD294B	Operate resin transfer moulding	2
	equipment	
PMBPROD298B	Operate equipment using pre-pregs	2
	material	
PMBPROD391B	Produce composites using resin	4
	infusion	
PMBPROD394B	Produce composites using resin	4
	transfer moulding	
PMBPROD398B	Produce composites using pre-pregs	4
PRSTS202A	Install security equipment/system	4
PRSTS302A	Program security equipment/system	2
PRSTS303A	Test installed security	2
	equipment/system	
PRSTS304A	Commission/decommission security	2
	equipment/system	
PRSTS305A	Identify and diagnose electronic	2
	security equipment/ system fault	
PRSTS307A	Maintain and service security	4
	equipment/system	
PRSTS317A	Provide estimate and quote	4
PRSTS319A	Modify and repair security	4
	equipment/system	
TLILIC0012A	Licence to operate a vehicle loading	1
	crane (capacity 10 metre tonnes and	
	above)	
TLILIC2001A	Licence to operate a forklift truck	0

MEM50105 - Diploma of Engineering - Advanced Trade (Release 5)

Packaging Rules

The minimum requirements for achievement of the Diploma of Engineering - Advanced Trade are:

- completion of all of the Core units of competency listed below, and
- completion of Specialisation units from the Group A list below to a maximum value of 100 points, and
- completion of units up to the value of 12 points from the Group B list below and
- completion of units from the Group C list below to bring the total value of units from Groups A, B and C to at least 117 points.

Points associated with prerequisites count towards the total (refer to units and prerequisites listing in Appendix 2 in this Training Package).

Appropriate elective units to the value of 26 points may be chosen from other endorsed Training Packages and accredited courses where those units are available for inclusion at Diploma. Note that the elective units listed below include all of the units that are approved for selection from the MEM Training Package for use in this 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.

Only select units that would be suitable for occupational outcomes in a manufacturing, engineering or related environment.

Additional qualification descriptors

The following additional descriptors are approved for use with this qualification: Refrigeration and Air-conditioning; Casting and Moulding; CNC programming; Fluid Power; Heavy Fabrication; Instrumentation; Maintenance; Marine Electronics; Mechatronics; Patternmaking; Robotics; Toolmaking; Welding, Watch and Clock Service and Repair.

Core units of competency

• select all of the units from this list.

Unit code	Unit title
MEM12023A	Perform engineering measurements
MEM12024A	Perform computations
MEM12025A	Use graphical techniques and perform simple statistical computations
MEM13014A	Apply principles of occupational health and safety in the work
	environment
MEM14004A	Plan to undertake a routine task

MEM14005A	Plan a complete activity
MEM15002A	Apply quality systems
MEM15024A	Apply quality procedures
MEM16006A	Organise and communicate information
MEM16007A	Work with others in a manufacturing, engineering or related
	environment
MEM16008A	Interact with computing technology
MEM16009A	Research and analyse engineering information
MEM16011A	Communicate with individuals and small groups
MEM16012A	Interpret technical specifications and manuals
MEM16014A	Report technical information
MEM17003A	Assist in the provision of on the job training
MEM30012A	Apply mathematical techniques in a manufacturing, engineering or
	related
MSAENV272B	Participate in environmentally sustainable work practices
=1	

Elective units of competency

Group A - Specialisation units

• select units from this list to a maximum value of 100 points

Unit code	Unit title	Р
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
MEM03005B	Rework and repair (electrical/electronic production)	8
MEM03006B	Set assembly stations	2
MEM04001B	Operate melting furnaces	4
MEM04002B	Perform gravity die casting	2
MEM04003B	Operate pressure die casting machine	4
MEM04004B	Prepare and mix sand for metal moulding	4
MEM04005C	Produce moulds and cores by hand (jobbing)	16
MEM04006B	Operate sand moulding and core making machines	8
MEM04007B	Pour molten metal	4
MEM04008B	Fettle and trim metal castings/forgings	4
MEM04010B	Develop and manufacture wood patterns	20
MEM04011B	Produce polymer patterns	8
MEM04012B	Assemble plated patterns	8
MEM04013B	Develop and manufacture polystyrene patterns	2
MEM04014B	Develop and manufacture production patterns	8
MEM04015B	Develop and manufacture vacuum forming moulds and	6
	associated equipment	
MEM04016C	Develop and manufacture precision models	6
MEM04017B	Develop and manufacture gear, conveyor screw and propeller	4
	patterns	
MEM04018B	Perform general woodworking machine operations	4
MEM04019B	Perform refractory installation and repair	4

MEM05001B	Perform manual soldering/desoldering electrical/electronic components	4
MEM05002B	Perform high reliability soldering and desoldering	4
MEM05003B	Perform soft soldering	2
MEM05004C	Perform routine oxy acetylene welding	2
MEM05005B	Carry out mechanical cutting	2
MEM05006B	Perform brazing and/or silver soldering	2
MEM05007C	Perform manual heating and thermal cutting	2
MEM05008C	Perform advanced manual thermal cutting, gouging and shaping	2
MEM05009C	Perform automated thermal cutting	2
MEM05010C	Apply fabrication, forming and shaping techniques	8
MEM05011D	Assemble fabricated components	8
MEM05012C	Perform routine manual metal arc welding	2
MEM05013C	Perform manual production welding	2
MEM05014C	Monitor quality of production welding/fabrications	2
MEM05015D	Weld using manual metal arc welding process	4
MEM05016C	Perform advanced welding using manual metal arc welding	4
IVILIVIOSOTOC	process	-
MEM05017D	Weld using gas metal arc welding process	4
MEM05018C	Perform advanced welding using gas metal arc welding process	4
MEM05019D	Weld using gas tungsten arc welding process	4
MEM05020C	Perform advanced welding using gas tungsten arc welding	4
	process	
MEM05022C	Perform advanced welding using oxy acetylene welding process	6
MEM05023C	Weld using submerged arc welding process	4
MEM05036C	Repair/replace/modify fabrications	4
MEM05037C	Perform geometric development	6
MEM05038B	Perform advanced geometric development	2
	cylindrical/rectangular	
MEM05039B	Perform advanced geometric development conical	2
MEM05040B	Perform advanced geometric development transitions	4
MEM05041B	Weld using powder flame spraying	4
MEM05047B	Weld using flux core arc welding process	4
MEM05048B	Perform advanced welding using flux core arc welding process	4
MEM05049B	Perform routine gas tungsten arc welding	2
MEM05050B	Perform routine gas metal arc welding	2
MEM05051A	Select welding processes	2
MEM05052A	Apply safe welding practices	4
MEM06001B	Perform hand forging	4
MEM06002B	Perform hammer forging	4
MEM06003C	Carry out heat treatment	6
MEM06004B	Select heat treatment processes and test finished product	6
MEM06005B	Perform drop and upset forging	4
MEM06006C	Repair springs	4
MEM06007B	Perform basic incidental heat/quenching, tempering and	2
	annealing	

MEM06008A	Hammer forge complex shapes	4
MEM06009A	Hand forge complex shapes	4
MEM07001B	Perform operational maintenance of machines/equipment	2
MEM07002B	Perform precision shaping/planing/slotting operations	4
MEM07003B	Perform machine setting (routine)	4
MEM07004B	Perform machine setting (complex)	8
MEM07005C	Perform general machining	8
MEM07006C	Perform lathe operations	4
MEM07007C	Perform milling operations	4
MEM07008D	Perform grinding operations	4
MEM07009B	Perform precision jig boring operations	4
MEM07010B	Perform tool and cutter grinding operations	4
MEM07011B	Perform complex milling operations	4
MEM07012B	Perform complex grinding operations	4
MEM07013B	Perform machining operations using horizontal and/or vertical	4
	boring machines	
MEM07014B	Perform electro-discharge (EDM) machining operations	4
MEM07015B	Set computer controlled machines/processes	2
MEM07021B	Perform complex lathe operations	4
MEM07024B	Operate and monitor machine/process	4
MEM07025B	Perform advanced machine/process operation	6
MEM07026B	Perform advanced plastic processing	6
MEM07027B	Perform advanced press operations	6
MEM07028B	Operate computer controlled machines/processes	2
MEM07029B	Perform routine sharpening/maintenance of production tools	4
141214107 0232	and cutters	'
MEM07030C	Perform metal spinning lathe operations (basic)	8
MEM07031C	Perform metal spinning lathe operations (complex)	4
MEM07032B	Use workshop machines for basic operations	2
MEM07033B	Operate and monitor basic boiler	6
MEM07034A	Operate and monitor intermediate class boiler	4
MEM07040A	Set multistage integrated processes	6
MEM08001B	Perform wire, jig and barrel load/unload work	4
MEM08002C	Pre-treat work for subsequent surface coating	4
MEM08003C	Perform electroplating operations	6
MEM08004B	Finish work using wet, dry and vapour deposition methods	4
MEM08005B	Prepare and produce specialised coatings	4
MEM08006B	Produce clear and/or coloured and/or sealed anodised films on	2
WEWOOOD	aluminium	
MEM08007B	Control surface finish production and finished product quality	4
MEM08008B	Operate and control surface finishing waste treatment process	3
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
MEM08013B	Prepare surfaces by abrasive blasting (basic) Prepare surfaces by abrasive blasting (advanced)	4

MEM08014B Apply protective coatings (basic) 4 MEM08015B Apply protective coatings (advanced) 4 MEM08016B Control blast coating by products, materials and emissions 1 MEM08018B Electroplate engineering coatings 6 MEM08020B Electroplate protective finishes 6 MEM08020B Interpret technical drawing 4 MEM09003B Prepare basic engineering drawing 8 MEM09005B Perform basic engineering detail drafting 8 MEM09001B Apply basic engineering design concepts 6 MEM09021B Interpret and produce curved 3-dimensional shapes 4 MEM09021B Interpret and produce curved 3-dimensional shapes 4 MEM09022A Create 2D code files using computer aided manufacturing 4 MEM10001C Erect structures 4 MEM10002B Terminate and connect electrical wiring 3 MEM10003B Install and test electrical wiring and circuits up to 1000 volts a.c. 12 MEM10004B Enter and change programmable controller poperational 2 MEM10005B Commi			
MEM08016B Control blast coating by-products, materials and emissions 1 MEM08018B Electroplate engineering coatings 6 MEM08020B Electroplate protective finishes 6 MEM08020B Electroplate decorative finishes 6 MEM09002B Interpret technical drawing 4 MEM09005B Perform basic engineering drawing 8 MEM0905B Perform basic engineering detail drafting 8 MEM0901B Apply basic engineering design concepts 6 MEM09021B Interpret and produce curved 3-dimensional shapes 4 MEM09022A Create 2D code files using computer aided manufacturing system 4 MEM10001C Erect structures 4 MEM10002B Terminate and connect electrical wiring 3 MEM10003B Install and test electrical wiring and circuits up to 1000 volts a.c. and 1500 volts d.c. 12 MEM10004B Enter and change programmable controller operational parameters 2 MEM10005B Commission programmable controller programs 4 MEM10006B Install prefrigeration and air conditioning plant and equipment 4 <td>MEM08014B</td> <td>Apply protective coatings (basic)</td> <td>4</td>	MEM08014B	Apply protective coatings (basic)	4
MEM08018B Electroplate engineering coatings 6 MEM08019B Electroplate protective finishes 6 MEM08020B Electroplate decorative finishes 6 MEM09002B Interpret technical drawing 4 MEM09003B Prepare basic engineering drawing 8 MEM09001B Perform basic engineering detail drafting 8 MEM0901B Apply basic engineering detail drafting 8 MEM09021B Interpret and produce curved 3-dimensional shapes 4 MEM0902A Create 2D code files using computer aided manufacturing 4 MEM10001C Erect structures 4 MEM10002B Terminate and connect electrical wiring and circuits up to 1000 volts a.c. and 1500 volts d.c. 12 MEM10003B Install and test electrical wiring and circuits up to 1000 volts a.c. and 1500 volts d.c. 12 MEM10004B Enter and change programmable controller operational parameters 2 MEM10005B Install machine/plant 4 MEM10006B Install merigeration and air conditioning plant and equipment 4 MEM1001B Install split air conditioning systems and associated pipework	MEM08015B	Apply protective coatings (advanced)	4
MEM08018B Electroplate engineering coatings 6 MEM08019B Electroplate protective finishes 6 MEM08020B Electroplate decorative finishes 6 MEM09002B Interpret technical drawing 4 MEM09003B Prepare basic engineering drawing 8 MEM09001B Perform basic engineering detail drafting 8 MEM0901B Apply basic engineering detail drafting 8 MEM09021B Interpret and produce curved 3-dimensional shapes 4 MEM0902A Create 2D code files using computer aided manufacturing 4 MEM10001C Erect structures 4 MEM10002B Terminate and connect electrical wiring and circuits up to 1000 volts a.c. and 1500 volts d.c. 12 MEM10003B Install and test electrical wiring and circuits up to 1000 volts a.c. and 1500 volts d.c. 12 MEM10004B Enter and change programmable controller operational parameters 4 MEM10005B Install machine/plant 4 MEM10006B Install merigeration and air conditioning plant and equipment 4 MEM1001B Install split air conditioning systems and associated pipework	MEM08016B	Control blast coating by-products, materials and emissions	1
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MEM08020B Electroplate decorative finishes 6 MEM09002B Interpret technical drawing 4 MEM09003B Prepare basic engineering drawing 8 MEM09005B Perform basic engineering detail drafting 8 MEM0901B Apply basic engineering design concepts 6 MEM09021B Interpret and produce curved 3-dimensional shapes 4 MEM09022A Create 2D code files using computer aided manufacturing system 4 MEM10001C Erect structures 4 MEM10002B Terminate and connect electrical wiring 3 MEM10003B Install and test electrical wiring and circuits up to 1000 volts a.c. 12 and 1500 volts d.c. MEM10004B Enter and change programmable controller operational parameters 2 MEM10005B Commission programmable controller programs 4 MEM10006B Install refrigeration and air conditioning plant and equipment 4 MEM1001B Install spit air conditioning systems and associated pipework 6 MEM1001B Terminate and connect specialist cables 3 MEM11001B Install spit air conditioning systems and	MEM08019B		6
MEM09002B Interpret technical drawing 4 MEM09003B Prepare basic engineering drawing 8 MEM09005B Perform basic engineering detail drafting 8 MEM0901B Apply basic engineering design concepts 6 MEM0902B Interpret and produce curved 3-dimensional shapes 4 MEM0902A Create 2D code files using computer aided manufacturing 4 MEM1000TC Erect structures 4 MEM10002B Terminate and connect electrical wiring 3 MEM10003B Install and test electrical wiring and circuits up to 1000 volts a.c. 12 and 1500 volts d.c. and 1500 volts d.c. 12 MEM10004B Enter and change programmable controller operational 2 parameters MEM10005B Commission programmable controller programs 4 MEM10005B Commission programmable controller programs 4 MEM10006B Install refrigeration and air conditioning plant and equipment 4 MEM10009B Install refrigeration and air conditioning plant and equipment 4 MEM1001B Terminate and connect specialist cables 3	MEM08020B	·	6
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MEM09021B Interpret and produce curved 3-dimensional shapes 4 MEM09022A Create 2D code files using computer aided manufacturing system 4 MEM10001C Erect structures 4 MEM10002B Terminate and connect electrical wiring 3 MEM10003B Install and test electrical wiring and circuits up to 1000 volts a.c. and 1500 volts d.c. 12 MEM10004B Enter and change programmable controller operational parameters 2 MEM10005B Commission programmable controller programs 4 MEM10006B Install machine/plant 4 MEM10009B Install refrigeration and air conditioning plant and equipment 4 MEM1001B Terminate and connect specialist cables 3 MEM1001C Erect/dismantle scaffolding and equipment 4 MEM11001C Erect/dismantle complex scaffolding and equipment 4 MEM11003B Coordinate erection/dismantling of complex scaffolding and equipm	MEM09011B	<u> </u>	6
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MEMILINAR TUNGENAKE NOUZIONE DIOCEONIEC TA	MEM11019B	system Undertake tool store procedures	4

MEM11020B	Perform advanced warehouse computer operations	4
MEM11021B	Perform advanced operation of load shifting equipment	2
MEM11022B	Operate fixed/moveable load shifting equipment	4
MEM12001B	Use comparison and basic measuring devices	2
MEM12002B	Perform electrical/electronic measurement	2
MEM12006C	Mark off/out (general engineering)	4
MEM12007D	Mark off/out structural fabrications and shapes	4
MEM12019B	Measure components using coordinate measuring machine	4
MEM12020B	Set and operate coordinate measuring machine	2
MEM12021B	Program coordinate measuring machine	4
MEM12022B	Program coordinate measuring machine (advanced)	2
MEM13001B	Perform emergency first aid	1
MEM13002B	Undertake occupational health and safety activities in the	3
WEWNSOOLD	workplace	
MEM13003B	Work safely with industrial chemicals and materials	2
MEM13004B	Work safely with molten metals/glass	2
MEM13006B	Collect and evaluate occupational health and safety data for an	4
IVILIVII3000B	enterprise or section of an enterprise	
MEM13007B	Maintain water treatment systems for cooling towers	2
MEM13010A	Supervise occupational health and safety in an industrial work	4
WILIWIISOTOA	environment.	
MEM13013B	Work safely with ionizing radiation	4
MEM15001B	Perform basic statistical quality control	2
MEM15003B	Use improvement processes in team activities	4
MEM15003B	Perform inspection	2
MEM15004B	Select and control inspection processes and procedures	4
MEM16002C	Conduct formal interviews and negotiations	4
MEM16004B	Perform internal/external customer service	2
MEM16005A	Operate as a team member to conduct manufacturing,	2
IVILIVITOUUJA	engineering or related activities	
MEM18001C	Use hand tools	2
MEM18002B	Use power tools/hand held operations	2
MEM18003C	Use tools for precision work	4
MEM18004B	Maintain and overhaul mechanical equipment	4
MEM18005B	Perform fault diagnosis, installation and removal of bearings	4
		6
MEM18006C	Repair and fit engineering components	4
MEM18007B	Maintain and repair mechanical drives and mechanical transmission assemblies	4
N 4 F N 410000 D		2
MEM18008B	Balance equipment	2
MEM18009B	Perform levelling and alignment of machines and engineering	4
N / EN / 10 O 10 D	Components Derform installation and removal of machanical scale	2
MEM18012B	Perform installation and removal of mechanical seals	2
MEM18013B	Perform gland packing	2
MEM18014B	Manufacture press tools and gauges	8
MEM18015B	Maintain tools and dies	4
MEM18018C	Maintain pneumatic system components	4

MEM18020B	Maintain hydraulic system components	4
MEM18024B	Maintain engine cooling systems	2
MEM18025B	Service combustion engines	2
MEM18026C	Test compression ignition fuel systems	4
MEM18027C	Overhaul engine fuel system components	8
MEM18028B	Maintain engine lubrication systems	2
MEM18029B	Tune diesel engines	4
MEM18030B	Diagnose and rectify low voltage electrical systems	8
MEM18031B	Diagnose and rectify low voltage starting systems	2
MEM18032B	Maintain induction/exhaust systems	4
MEM18033B	Perform engine bottom-end overhaul	4
MEM18034B	Perform engine top-end overhaul	8
MEM18035B	Diagnose and rectify braking systems	6
MEM18037B	Diagnose and rectify low voltage charging systems	2
MEM18038B	Maintain wheels and tyres	2
MEM18039B	Diagnose and rectify track type undercarriage	4
MEM18040B	Maintain suspension systems	4
MEM18041B	Maintain steering systems	4
MEM18042C	Diagnose and rectify manual transmissions	4
MEM18043C	Diagnose and rectify automatic transmissions	8
MEM18044C	Diagnose and rectify drive line and final drives	4
MEM18045B	Fault find/repair electrical equipment/components up to 250	4
	volts single phase supply	
MEM18046B	Fault find/repair electrical equipment/components up to 1000	10
	volts a.c./1500 volts d.c.	
MEM18047B	Diagnose and maintain electronic controlling systems on mobile	4
	plant	
MEM18048B	Fault find and repair/rectify basic electrical circuits	12
MEM18052B	Maintain fluid power systems for mobile plant	4
MEM18055B	Dismantle, replace and assemble engineering components	3
MEM18057B	Maintain/service analog/digital electronic equipment	6
MEM18063B	Terminate signal and data cables	4
MEM18064B	Maintain instrumentation system components	6
MEM18071B	Connect/disconnect fluid conveying system components	2
MEM18072B	Manufacture fluid conveying conductor assemblies	4
MEM18084A	Commission and decommission split air conditioning systems	4
MEM18085A	Install, service and repair domestic air conditioning and	6
	refrigeration appliances	
MEM18086B	Test, recover, evacuate and charge refrigeration systems	4
MEM18087B	Service and repair domestic and light commercial refrigeration	6
	and air conditioning equipment	
MEM18088B	Maintain and repair commercial air conditioning systems and	4
	components	
MEM18089B	Maintain and repair central air handling systems	6
MEM18090B	Maintain and repair industrial refrigeration systems and	6
	components	

MEM18094B	Service and repair commercial refrigeration	6
MEM18095A	Maintain and repair cooling towers/evaporative condensers and	4
	associated equipment	
MEM18096A	Maintain, repair/replace and adjust refrigerant flow controls and	6
	associated equipment	
MEM18097A	Manufacture cavity dies	8
MEM18098A	Prepare to perform work associated with fuel system installation	2
	and servicing*	
MEM19001B	Perform jewellery metal casting	6
MEM19002B	Prepare jewellery illustrations	4
MEM19003B	Handle gem materials	2
MEM19004B	Handle and examine gemstone materials	6
MEM19005B	Produce three-dimensional precision items	8
MEM19006B	Replace watch batteries	1
MEM19007B	Perform gemstone setting	6
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
MEM19012B	Produce jewellery wax model	4
MEM19014B	Perform hand engraving	4
MEM19015B	Perform jewellery enamelling	4
MEM19016B	Construct jewellery components	4
MEM19017B	Fabricate jewellery items	6
MEM19020B	Fault-find and maintain micro-mechanisms	4
MEM19021B	Diagnose and service micro-mechanisms	6
MEM20001A	Produce keys	4
MEM20002A	Assemble and test lock mechanisms	6
MEM20003A	Install and upgrade locks and hardware	4
MEM20004A	Gain entry	4
MEM20005A	Install and maintain door control devices/systems	2
MEM20006A	Maintain and service mechanical locking devices	6
MEM20007A	Plan and prepare a masterkey system	4
MEM20009A	Gain entry and reinstate fire and security containers	4
MEM20010A	Gain entry and reinstate automotive locking systems	4
MEM20014A	Perform a site security survey	2
MEM21001A	Replace watch batteries, capacitors and bands	2
MEM21002A	Perform watch movement exchange *	2
MEM21003A	Perform watch case servicing, repair and refurbishment *	4
MEM21004A	Clean watch and clock components	2
MEM21005A	Diagnose faults in quartz watches *	2
MEM21006A	Service quartz watches *	4
MEM21007A	Service complex quartz watches	4
MEM21008A	Service mechanical watches	4
MEM21009A	Inspect, diagnose, adjust and repair mechanical watches	4
MEM21010A	Service watch power generating systems	2

MEM21011A	Service calendar and other dial indication mechanisms for watches	4
MEM21012A	Service and repair mechanical watch oscillating systems	4
MEM21013A	Service, test and adjust watch escapements	4
MEM21014A	Service mechanical chronograph watches	6
MEM21015A	Perform precision watch timing and adjustment	6
MEM21016A	Install and set up clocks	2
MEM21017A	Service and repair clock timepieces	6
MEM24001B	Perform basic penetrant testing	2
MEM24003B	Perform basic magnetic particle testing	2
MEM24005B	Perform basic eddy current testing	2
MEM24007B	Perform ultrasonic thickness testing	2
MEM24009B	Perform basic radiographic testing	2
MEM25001B	Apply fibre-reinforced materials	2
MEM25002B	Form and integrate fibre-reinforced structures	4
MEM25003B	Set up marine vessel structures	4
MEM25004B	Fair and shape surfaces	2
MEM25005B	Construct and assemble marine vessel timber components	8
MEM25006B	Undertake marine sheathing operations	2
MEM25007B	Maintain marine vessel surfaces	4
MEM25007B	Form timber shapes using hot processes	2
MEM25010B	Perform fitout procedures	4
MEM25011B	Install marine systems	8
MEM25012B	Install and test operations of marine auxiliary systems	6
MEM25014B	Perform marine slipping operations	2
MEM25015A	Assemble and install equipment and accessories/ancillaries	2
MEM50002B	Work safely on marine craft	1
MEM50003B	Follow work procedures to maintain the marine environment	1
MEM50003B	Maintain quality of environment by following marina codes	1
MEM50009B	Safely operate a mechanically powered recreational boat	2
AURVTN2002	Carry out panel repairs	4
BSBOHS502A	Participate in the management of the OHS information and data systems	2
BSBOHS601A	Develop a systematic approach to managing OHS	4
BSBOHS602A	Develop OHS information and data analysis and reporting and recording processes	2
BSBOHS603A	Analyse and evaluate OHS risk	4
ICTTC136B	Install, maintain and modify customer premises communications cabling: ACA Restricted Rule	6
ICTTC137B	Install, maintain and modify customer premises communications cabling: ACA Open Rule	6
MEA405A	Repair/modify aircraft composite material structure/components	4
PMBPROD291B	Operate resin infusion moulding equipment	2
PMBPROD294B	Operate resin transfer moulding equipment	2
PMBPROD298B	Operate equipment using pre-pregs material	2
PMBPROD391B	Produce composites using resin infusion	4

4
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0

Group B - Specialisation units (optional)
Units up to the value of 12 points may be selected from this list.

Unit code	Unit title	Р
MEM05026C	Apply welding principles	4
MEM05042B	Perform welds to code standards using flux core arc welding	6
	process	
MEM05043B	Perform welds to code standards using gas metal arc welding	6
	process	
MEM05044B	Perform welds to code standards using gas tungsten arc welding	6
	process	
MEM05045B	Perform pipe welds to code standards using manual metal arc	6
	welding process	
MEM05046B	Perform welds to code standards using manual metal arc	6
	welding process	
MEM05053A	Set and edit computer controlled thermal cutting machines	4
MEM05054A	Write basic NC/CNC programs for thermal cutting machines	4
MEM07016C	Set and edit computer controlled machines/processes	4
MEM07018C	Write basic NC/CNC programs	4
MEM07019C	Program NC/CNC machining centre	2
MEM07020C	Program multiple spindle and/or multiple axis NC/CNC	2
	machining centre	
MEM07022C	Program CNC wire cut machines	2
MEM12003B	Perform precision mechanical measurement	2
MEM12004B	Perform precision electrical/electronic measurement	4
MEM18011C	Shut down and isolate machines/equipment	2
MEM18049C	Disconnect/reconnect fixed wired equipment up to 1000 volts	3
	a.c./1500 volts d.c.	
MEM18050C	Disconnect/reconnect fixed wired equipment over 1000 volts	3
	a.c./1500 volts d.c.	

MEM18054B	Fault find, test and calibrate instrumentation systems and	8
	equipment	
MEM18056B	Diagnose and repair analog equipment and components	10
MEM18062B	Install, maintain and calibrate instrumentation sensors,	8
	transmitters and final control elements	
MEM18065B	Diagnose and repair digital equipment and components	10
MEM18092B	Maintain and repair commercial and/or industrial refrigeration	6
	and/or air conditioning controls	

Group C - Specialisation units

• Select units from this list to bring the total value of the Specialisation units chosen from Groups A, B and C to 117 points, including any prerequisites.

•

Unit code	Unit title	Р
MEM05024B	Perform welding supervision	12
MEM05025C	Perform welding/fabrication inspection	12
MEM07023C	Program and set up CNC manufacturing cell	6
MEM07039A	Write programs for industrial robots	4
MEM09004B	Perform electrical/electronic detail drafting	8
MEM09006B	Perform advanced engineering detail drafting	4
MEM09007B	Perform advanced mechanical detail drafting	4
MEM09008B	Perform advanced structural detail drafting	4
MEM09009C	Create 2D drawings using computer aided design system	8
MEM09010C	Create 3D models using computer aided design system	4
MEM09023A	Create 3D code files using computer aided manufacturing	6
	system	
MEM10007C	Modify control systems	6
MEM10008B	Undertake commissioning procedures for plant and/or	4
	equipment	
MEM12005B	Calibrate measuring equipment	6
MEM14001B	Schedule material deliveries	8
MEM14002B	Undertake basic process planning	8
MEM14003B	Undertake basic production scheduling	8
MEM15007B	Conduct product and/or process capability studies	6
MEM15008B	Perform advanced statistical quality control	2
MEM15010B	Perform laboratory procedures	8
MEM15011B	Exercise external quality assurance	6
MEM15012B	Maintain/supervise application of quality procedures	4
MEM15015B	Examine trading practices	5
MEM15016B	Inspect pre-packed articles	8
MEM15017B	Use and maintain reference standards	3
MEM15018B	Investigate consumer complaints	6
MEM15019B	Conduct a field inspection	12
MEM15020C	Perform verification/certification or in-service inspection	12

MEM15021C	Conduct audits of servicing licensees and public weighbridge licensees	4
MEM15022B	Verify reference standards	8
MEM16001B	Give formal presentations and take part in meetings	2
MEM16003B	Provide advanced customer service	2
MEM16010A	Write reports	2
MEM16013A	Operate in a self-directed team	2
MEM17001B	Assist in development and deliver training in the workplace	2
MEM17002B	Conduct workplace assessment	2
MEM18010C	Perform equipment condition monitoring and recording	4
MEM18016B	Analyse plant and equipment condition monitoring results	4
MEM18017C	Modify mechanical systems and equipment	8
MEM18019B	Maintain pneumatic systems	4
MEM18021B	Maintain hydraulic systems	4
MEM18022B	Maintain fluid power controls	8
MEM18023B	Modify fluid power system operation	8
MEM18051B	Fault find and repair/rectify complex electrical circuits	6
MEM18053B	Modify fluid power control systems	6
MEM18058C	Modify electronic equipment	4
MEM18059B	Modify electronic systems	4
MEM18060B	Maintain, repair control instrumentation single and multiple loop	8
	control systems	
MEM18061B	Maintain/calibrate complex control systems	8
MEM18066B	Diagnose and repair microprocessor-based equipment	6
MEM18067B	Tune control loops multi controller or multi element systems	6
MEM18069B	Maintain, repair instrumentation process control analysers	6
MEM18070C	Modify complex electrical circuits and systems	6
MEM18073A	Perform advanced equipment testing and diagnostics on mobile plant and equipment	8
MEM18091B	Maintain and repair multi stage, cascade and/or ultra-cold industrial refrigeration systems	4
MEM18093B	Maintain and repair integrated industrial refrigeration and/or large air handling system controls	8
MEM19008B	Prepare jewellery designs	6
MEM19013B	Produce jewellery metal masters	4
MEM19018B	Repair jewellery items	6
MEM19022B	Perform precision micro-mechanism diagnosis and servicing	6
MEM20008A	Develop and implement a masterkey system	6
MEM20011A	Service and repair fire and security containers	6
MEM20012A	Service and repair mechanical automotive locking systems	4
MEM20013A	Service automotive transponder systems	2
MEM21018A	Service clock escapements and oscillating systems	4
MEM21019A	Service and repair clock striking mechanisms	4
MEM21020A	Service and repair clock chiming mechanisms	6
MEM21021A	Restore clockwork mechanisms	6
MEM21022A	Manufacture watch and clock components	6

MEM21023A	Plan, set up and operate horological workshop or service centre	4
MEM24002B	Perform penetrant testing	4
MEM24004B	Perform magnetic particle testing	4
MEM24006B	Perform eddy current testing	6
MEM24008B	Perform ultrasonic testing	6
MEM24010B	Perform radiographic testing	6
MEM24011B	Establish non-destructive tests	12
MEM24012C	Apply metallurgy principles	4
MEM25008B	Repair marine vessel surfaces and structures	4
MEM25013B	Produce three-dimensional plugs/moulds	12
MEM30025A	Analyse a simple electrical circuit	4
MSAENV472B	Implement and monitor environmentally sustainable work	4
	practices	

The minimum requirements for this qualification can also be met by holders of one of the following qualifications or equivalent subject to the completion of the Core units of competency as specified for this Diploma as well as additional Specialisation units of competency drawn from Specialisation units Group A to a maximum value of 24 points and Specialisation units in Group B and Group C (units to a maximum of 12 points may be selected from Group B) to bring the total value of additional units to at least 44 points (note that additional units are those units not included in the Certificate III qualification already held):

- MEM30105 Certificate III in Engineering Production Systems
- MEM30205 Certificate III in Engineering Mechanical Trade
- MEM30305 Certificate III in Engineering Fabrication Trade
- MEM30405 Certificate III in Engineering Electrical/Electronic Trade
- MEM30605 Certificate III in Jewellery Manufacture
- MEM30705 Certificate III in Marine Craft Construction
- MEM30805 Certificate III in Locksmithing
- MEM31010 Certificate III in Watch and Clock Service and Repair.
- AUR30305 Certificate III in Marine

In addition to the above, the minimum requirements for this qualification can also be met by holders of the MEM40105 Certificate IV in Engineering subject to the completion of the Mandatory units of competency as specified above as well as additional Specialisation units drawn from Specialisation units Group A to bring the total value of additional units to at least 8 points. Where higher level Core units (i.e. those required beyond Certificate IV) were included in the Certificate IV as Specialisation units then additional Specialisation units from Group C to the same points value will also be need to be completed.

UEESS00110 - Sustainable - Installer of Grid Connected Photovoltaic Systems (Release 2)

Skill Set Requirements

UEENEEG171A Install, set up and commission interval metering

UEENEEK125A Solve basic problems in photovoltaic energy apparatus and systems

UEENEEK148A Install, configure and commission LV grid connected photovoltaic power systems

UEESS00100 - Sustainable - Designer of Grid Connected Photovoltaic Systems (Release 2)

Skill Set Requirements

UEENEEE103A Solve problems in ELV single path circuits

UEENEEE104A Solve problems in d.c. circuits

UEENEEE105A Fix and secure electrotechnology equipment

UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications

UEENEEE108A Lay wiring_cabling and terminate accessories for extra-low voltage (ELV) circuits

UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work

UEENEEK125A Solve basic problems in photovoltaic energy apparatus and systems

UEENEEK135A Design grid connected photovoltaic power supply systems

UEESS00101 - Sustainable - Designer-Installer of Grid Connected Photovoltaic Systems (Release 2)

Skill Set Requirements

UEENEEG171A Install, set up and commission interval metering

UEENEEK125A Solve basic problems in photovoltaic energy apparatus and systems

UEENEEK135A Design grid connected photovoltaic power supply systems

UEENEEK148A Install, configure and commission LV grid connected photovoltaic power systems

UEESS00159 - Sustainable - Designer of Grid Connected Photovoltaic Systems Skill Set (Release 1)

Skill Set Requirements

The following units of competency must be attained.		
UEECD0007	Apply work health and safety regulations, codes and practices in the	
	workplace	
UEECD0051	Use drawings, diagrams, schedules, standards, codes and specifications	
UEERE0011	Design grid-connected photovoltaic power supply systems	
UEERE0022	Solve basic problems in photovoltaic energy apparatus and systems	
AND		
UEECD0043	Solve problems in direct current circuits	
OR		
UEECD0044	Solve problems in multiple path circuits	
UEECD0046	Solve problems in single path circuits	

UEE21911 - Certificate II in Electronics (Release 3)

Packaging Rules

Completion requirements

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

- All the Core competency standard units, defined in the Core Competency Standard Units table below and
- A combination of Elective competency standard units to achieve a total weighting of 120 points in accordance with the Elective Competency Standard Units table below.

. Core Competency Standard Units		Weighting Points
All Core competency standard units to be achieved		1 01113
UEENEEE038B	Participate in development and follow a personal competency development plan	20
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40
UEENEEE104A	Solve problems in d.c. circuits	80
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	20
Total points in core		240

Elective Competency Standard Units

Complete Elective units to achieve a total of weighting of 120 points from the following groups:

Gro	Group		Maximum points
A	Imported or Non-Technical Competency Standard Units Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 2. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	0	60
В	Qualification Elective Units You may select all your elective units from this Group	60	120

	and Common Elective Units	Weighting Points
	units to a maximum weighting of 60	
UEENEEC001B	Maintain documentation	20
UEENEEC002B	Source and purchase material/parts for installation or service jobs	20
UEENEEC008B	Receive and store materials and equipment for electrotechnology work	20
UEENEEC010B	Deliver a service to customers	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20
	Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 2. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	Up to 60 Points
	Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework	
Group B Qualificati	ion Elective Units	Weighting
		Points
Complete units to	a minimum weighting of 60 your elective units from this Group	Points
Complete units to You may select all	a minimum weighting of 60	Points 40
Complete units to You may select all UEENEEA101A	a minimum weighting of 60 your elective units from this Group	
Complete units to You may select all UEENEEA101A UEENEEA102A	a minimum weighting of 60 your elective units from this Group Assemble electronic components	40
Complete units to You may select all UEENEEA101A UEENEEA102A UEENEEA103A	your elective units from this Group Assemble electronic components Select electronic components for assembly Set up and check electronic component assembly	40 20
Complete units to You may select all UEENEEA101A UEENEEA102A UEENEEA103A UEENEEA104A	a minimum weighting of 60 your elective units from this Group Assemble electronic components Select electronic components for assembly Set up and check electronic component assembly machines Modify electronic sub assemblies Conduct quality and functional tests on assembled	40 20 40
Complete units to You may select all UEENEEA101A UEENEEA102A UEENEEA103A UEENEEA104A UEENEEA105A	a minimum weighting of 60 your elective units from this Group Assemble electronic components Select electronic components for assembly Set up and check electronic component assembly machines Modify electronic sub assemblies	40 20 40 40
Complete units to You may select all UEENEEA101A UEENEEA102A UEENEEA103A UEENEEA104A UEENEEA105A UEENEEA106A	a minimum weighting of 60 your elective units from this Group Assemble electronic components Select electronic components for assembly Set up and check electronic component assembly machines Modify electronic sub assemblies Conduct quality and functional tests on assembled electronic apparatus	40 20 40 40 20
Complete units to You may select all UEENEEA101A UEENEEA102A UEENEEA103A UEENEEA104A UEENEEA105A UEENEEA106A UEENEEB101A	a minimum weighting of 60 your elective units from this Group Assemble electronic components Select electronic components for assembly Set up and check electronic component assembly machines Modify electronic sub assemblies Conduct quality and functional tests on assembled electronic apparatus Use lead-free soldering techniques Operate and maintain amateur radio communication stations	40 20 40 40 20 40
Complete units to You may select all UEENEEA101A UEENEEA102A UEENEEA103A UEENEEA104A UEENEEA105A UEENEEA106A UEENEEB101A UEENEEB101A	a minimum weighting of 60 your elective units from this Group Assemble electronic components Select electronic components for assembly Set up and check electronic component assembly machines Modify electronic sub assemblies Conduct quality and functional tests on assembled electronic apparatus Use lead-free soldering techniques Operate and maintain amateur radio communication stations Use computer applications relevant to a workplace	40 20 40 40 20 40 40
Complete units to You may select all UEENEEA101A UEENEEA102A UEENEEA103A UEENEEA104A UEENEEA105A UEENEEA106A UEENEEB101A UEENEED101A UEENEED101A	a minimum weighting of 60 your elective units from this Group Assemble electronic components Select electronic components for assembly Set up and check electronic component assembly machines Modify electronic sub assemblies Conduct quality and functional tests on assembled electronic apparatus Use lead-free soldering techniques Operate and maintain amateur radio communication stations	40 20 40 40 20 40 40 20
Complete units to You may select all UEENEEA101A UEENEEA102A UEENEEA103A UEENEEA104A UEENEEA105A UEENEEA106A UEENEEB101A UEENEED101A UEENEED101A UEENEED102A UEENEED102A	a minimum weighting of 60 your elective units from this Group Assemble electronic components Select electronic components for assembly Set up and check electronic component assembly machines Modify electronic sub assemblies Conduct quality and functional tests on assembled electronic apparatus Use lead-free soldering techniques Operate and maintain amateur radio communication stations Use computer applications relevant to a workplace Assemble, set-up and test computing devices Install and configure a client computer operating system and software	40 20 40 40 20 40 40 20 80
Complete units to You may select all UEENEEA101A UEENEEA102A UEENEEA103A UEENEEA104A UEENEEA105A UEENEEA106A UEENEEB101A UEENEED101A UEENEED102A UEENEED143A UEENEED146A	a minimum weighting of 60 your elective units from this Group Assemble electronic components Select electronic components for assembly Set up and check electronic component assembly machines Modify electronic sub assemblies Conduct quality and functional tests on assembled electronic apparatus Use lead-free soldering techniques Operate and maintain amateur radio communication stations Use computer applications relevant to a workplace Assemble, set-up and test computing devices Install and configure a client computer operating system and software Set up and configure basic local area network (LAN)	40 20 40 40 20 40 40 40 40 40
Complete units to You may select all UEENEEA101A UEENEEA102A UEENEEA103A UEENEEA104A UEENEEA105A UEENEEA106A UEENEEB101A UEENEED101A UEENEED102A UEENEED143A UEENEED146A UEENEED146A UEENEEE105A	a minimum weighting of 60 your elective units from this Group Assemble electronic components Select electronic components for assembly Set up and check electronic component assembly machines Modify electronic sub assemblies Conduct quality and functional tests on assembled electronic apparatus Use lead-free soldering techniques Operate and maintain amateur radio communication stations Use computer applications relevant to a workplace Assemble, set-up and test computing devices Install and configure a client computer operating system and software	40 20 40 40 20 40 40 20 80 40 40
Complete units to	your elective units from this Group Assemble electronic components Select electronic components for assembly Set up and check electronic component assembly machines Modify electronic sub assemblies Conduct quality and functional tests on assembled electronic apparatus Use lead-free soldering techniques Operate and maintain amateur radio communication stations Use computer applications relevant to a workplace Assemble, set-up and test computing devices Install and configure a client computer operating system and software Set up and configure basic local area network (LAN) Fix and secure electrotechnology equipment Use drawings, diagrams, schedules, standards, codes and	40 20 40 40 20 40 40 40 40 40 20

UEENEEE123A	Solve basic problems electronic and digital equipment and circuits	80
UEENEEE141A	Use of routine equipment/plant/technologies in an	40
	energy sector environment	
UEENEEE146A	Identify effects of energy on machinery and materials in	120
	an energy sector environment	
UEENEEE179A	Identify and select components, accessories and materials	20
	for energy sector work activities	
UEENEEF106A	Solve problems in voice and data communications circuits	40
UEENEEF107A	Set up and configure the wireless capabilities of	40
	communications and data storage devices	
UEENEEH101A	Repair basic computer equipment faults by replacement	40
	of modules/sub-assemblies	
UEENEEH104A	Set up and test residential video/audio equipment	40
UEENEEH108A	Assemble and install reception antennae and signal	60
	distribution equipment	
UEENEEH128A	Install and test microwave antennae and waveguides	60
UEENEEH161A	Install fire detection and warning system apparatus	40
UEENEEH169A	Solve problems in basic electronic circuits	100
UEENEEI116A	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices	

UEE10120 - Certificate I in ElectroComms Skills (Release 1)

Packaging Rules

A total of 180 weighting points comprising:

120 core weighting points listed below; plus

60 general elective weighting points from the general elective units listed below.

Choose a total of 60 **weighting points** elective units from the list below, of which between 0 and 30 **weighting points** can be taken from Group A; and between 30 and 60 **weighting points** must be taken from Group B.

Up to 30 weighting points of the general elective units Group A , may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points, unless directed from the Electrotechnology Industry Reference Committee (IRC).

There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

Where imported units are selected, care must be taken to ensure all pre-requisite units specified are complied with.

Core units		Weighting Points
ICTICT203	Operate application software packages	20
UEECD0007	Apply work health and safety regulations, codes and	20
	practices in the workplace	
UEECD0009	Carry out routine work activities in an energy sector environment*	40
UEECD0021	Identify and select components, accessories and materials for energy sector work activities*	20
UEERE0001	Apply environmentally and sustainable procedures in	20
	the energy sector	
Group A: Imported	and common elective units.	Weighting Points
BSBCUS201	Deliver a service to customers	20
UEECO0002	Maintain documentation	20
UEECO0016	Receive and store materials and equipment for	20
	electrotechnology work	
UEECO0017	Source and purchase material/parts for installation or	20
	service jobs	
Group B: Qualificat	tion elective units.	Weighting Points

UEECD0019	Fabricate, assemble and dismantle utilities industry	40
	components*	
UEECD0020	Fix and secure electrotechnology equipment*	20
UEECD0035	Provide basic instruction in the use of	20
	electrotechnology apparatus	
UEECD0042	Solve problems in ELV single path circuits*	40
UEEEC0046	Operate and maintain amateur radio communication	40
	stations*	

UEE30811 - Certificate III in Electrotechnology Electrician (Release 4)

Packaging Rules

Completion requirements

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

- All the Core competency standard units, defined in the Core Competency Standard Units table below and
- A combination of Elective competency standard units to achieve a total weighting of 140 points in accordance with the Elective Competency Standard Units table below.

Core Competency Standard Units		Weighting Points	
-	y standard units to be achieved		
UEENEEC020B	Participate in electrical work and competency	60	
	development activities		
UEENEEE101A	Apply Occupational Health and Safety regulations,	20	
	codes and practices in the workplace		
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40	
	components		
UEENEEE104A	Solve problems in d.c. circuits	80	
UEENEEE105A	Fix and secure electrotechnology equipment	20	
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes	40	
	and specifications		
UEENEEE137A	Document and apply measures to control OHS risks	20	
	associated with electrotechnology work		
UEENEEG006A	Solve problems in single and three phase low voltage	80	
	machines		
UEENEEG033A	Solve problems in single and three phase low voltage	60	
	electrical apparatus and circuits		
UEENEEG063A	Arrange circuits, control and protection for general	40	
	electrical installations		
UEENEEG101A	Solve problems in electromagnetic devices and related	60	
	circuits		
UEENEEG102A	Solve problems in low voltage a.c. circuits	80	
UEENEEG103A	Install low voltage wiring and accessories	20	
UEENEEG104A	Install appliances, switchgear and associated accessories	20	
	for low voltage electrical installations		
UEENEEG105A	Verify compliance and functionality of low voltage	40	
	general electrical installations		
UEENEEG106A	Terminate cables, cords and accessories for low voltage	40	
	circuits		
UEENEEG107A	Select wiring systems and cables for low voltage general	60	
	electrical installations		

UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical	40
	apparatus and circuits	
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEK142A	Apply environmentally and sustainable procedures in	20
	the energy sector	
Total points in core		920

Total points in core			920
ctive Competency S	Standard Units		
mplete Elective unit	s to achieve a total of weighting of 140 poi		
Group Minimum			Maximum
1		+ -	points
Imported and Co	mmon Elective Units	0	60
accredited course must be selected packaged at AQF	es can be added to this group, but they from qualifications where the unit is first level 3. If units have not being assigned a		
Qualification Elec	tive Units	80	140
You may select al	I vour elective units from this Group		
Group A Imported and Common Elective Units			Weighting Points
	T		20
		nstallation or	20
OLLINELCOOLD		nistaniation of	
		20	
ENEEC010B			20
ENEED101A	Use computer applications relevant to a	workplace	20
UEENEEE009B	Comply with scheduled and preventative	maintenance	20
	program processes		
ENEEE020B			20
	3, 11		10
·		10	
			10
AIDUU3		1.7	10
	state accredited courses can be added to but they must be selected from qualification the unit is first packaged at AQF level 3. not being assigned a weighting by the results of the course of the co	this group, tions where If units have elevant EE-Oz	Up to 60 points
	Imported and Co Imported units from accredited courses must be selected packaged at AQF weighting by the Advisory Commit Qualification Electory and Selected packaged at AQF weighting by the Advisory Commit Qualification Electory and Selected packaged at AQF weighting by the Advisory Commit Qualification Electory and Selected packaged at AQF weighting by the Advisory Commit Qualification Electory and Selected Population Electory and Selected Population Electory and Selectory	Imported and Common Elective Units Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points. Qualification Elective Units You may select all your elective units from this Group and Common Elective Units I may complete units to a maximum weighting of 60 and provide quotations for installation or service jobs NEEC001B Maintain documentation NEEC003B Provide quotations for installation or service jobs NEEC010B Deliver a service to customers NE	Imported and Common Elective Units packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points. Qualification Elective Units You may select all your elective units from this Group Imported and Common Elective Units I may complete units to a maximum weighting of 60 INEEC001B Maintain documentation INEEC002B Source and purchase material/parts for installation or service jobs INEEC001B Deliver a service to customers INEEC010B Provide quotations relevant to a workplace Comply with scheduled and preventative maintenance program processes INEEC02B Provide basic instruction in the use of electrotechnology apparatus COHS1001A Work safely in the construction industry AID001 Provide cardiopulmonary resuscitation

	Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification	
	Framework	
Group B Qualification		Weighting Points
Complete units to a	minimum weighting of 80	1 Omis
You may select all yo	our elective units from this Group	
UEENEEA110A	Assemble, mount and connect control gear and switchgear	40
UEENEEA112A	Fabricate and assemble bus bars	40
UEENEEA113A	Mount and wire control panel equipment	40
UEENEED104A	Use engineering applications software on personal computers	40
UEENEEE121A	Plan an integrated cabling installation system	40
UEENEEF102A	Install and maintain cabling for multiple access to telecommunication services	120
UEENEEF104A	Install and modify performance data communication copper cabling	40
UEENEEG110A	Find and repair faults in LV d.c. electrical apparatus and circuits	60
UEENEEG111A	Carry out basic repairs to electrical components and equipment	40
UEENEEG113A	Install and maintain emergency safety systems	60
UEENEEG116A	Diagnose and rectify faults in traction lift systems	80
UEENEEG118A	Maintain operation of electrical mining equipment and systems	60
UEENEEG119A	Maintain operation of electrical marine equipment and systems	60
UEENEEG120A	Select and arrange equipment for special LV electrical installations	60
UEENEEG126A	Install and maintain field power and distribution systems with a low voltage demand up to 200 A per phase	40
UEENEEG129A	Overhaul and repair major switchgear and controlgear	60
UEENEEG150A	Wind electrical coils	40
UEENEEG151A	Place and connect electrical coils	40
UEENEEG152A	Rewind single phase machines	40
UEENEEG153A	Rewind three phase low voltage induction machines	60
UEENEEG154A	Rewind LV direct current machines	60
UEENEEG157A	Conduct electrical tests on LV electrical machines	40
UEENEEG159A	Conduct mechanical tests on electrical machines and components	40
UEENEEG164A	Repair and maintain mechanical components of electrical machines	40

UEENEEG165A	Maintain and service traction lifts systems and	40
UEENEEG166A	equipment Install and maintain escalators, moving walks and	40
UEENEEG167A	treadways Align and install traction lift equipment	20
UEENEEG171A	Install, set up and commission interval metering	20
		20
UEENEEG181A	Provide advice on effective and energy efficient lighting products	20
UEENEEG182A	Supply effective and efficient lighting products for	40
OLLINLLGIOZA	domestic and small commercial applications	40
UEENEEG183A	Provide advice on the application of energy efficient	20
OLLINELGIOSA	lighting for ambient and aesthetic effect	20
UEENEEG189A	Install and maintain emergency lighting systems	40
UEENEEH102A	Repairs basic electronic apparatus faults by	40
OLLINELITIOZA	replacement of components	40
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40
UEENEEH150A	Assemble and set up basic security systems	80
UEENEEI140A	Plan the electrical installation of integrated systems	20
UEENEEI141A	Develop electrical integrated systems	20
	9 7	40
UEENEEI101A	Use instrumentation drawings, specification, standards and equipment manuals	40
UEENEEI102A		40
UEENEEHUZA	Solve problems in pressure measurement components and systems	40
UEENEEI103A	Solve problems in density/level measurement	40
OLLINELIIO5/ (components and systems	10
UEENEEI104A	Solve problems in flow measurement components and	40
	systems	
UEENEEI105A	Solve problems in temperature measurement	40
	components and systems	
UEENEEI116A	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices	
UEENEEI150A	Develop, enter and verify discrete control programs	60
	for programmable controllers	
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	30
UEENEEJ103A	Establish the basic operating conditions of vapour	60
	compression systems	
UEENEEJ104A	Establish the basic operating conditions of air	20
	conditioning systems	
UEENEEJ105A	Position, assemble and start up single head split air	70
	conditioning and water heating heat pump systems	
UEENEEJ172A	Recover, pressure test, evacuate, charge and leak test	60
	refrigerants split systems	
UEENEEK125A	Solve basic problems in photovoltaic energy apparatus	20
	and systems	
UEENEEK148A	Install, configure and commission LV grid connected	40
	photovoltaic power systems	

UEENEEM019A	Attend to breakdowns in hazardous areas coal mining	20
UEENEEM020A	Attend to breakdowns in hazardous areas gas	20
	atmospheres	
UEENEEM021A	Attend to breakdowns in hazardous areas dust	20
	atmospheres	
UEENEEM022A	Attend to breakdowns in hazardous areas	20
	pressurisation	
UEENEEM023A	Install explosion-protected equipment and wiring	60
	systems coal mining	
UEENEEM024A	Install explosion-protected equipment and wiring	60
	systems gas atmospheres	
UEENEEM025A	Install explosion-protected equipment and wiring	60
	systems dust atmospheres	
UEENEEM026A	Install explosion-protected equipment and wiring	60
	systems pressurisation	
UEENEEM027A	Maintain equipment in hazardous areas coal mining	60
UEENEEM028A	Maintain equipment in hazardous areas gas	60
	atmospheres	
UEENEEM029A	Maintain equipment in hazardous areas dust	60
	atmospheres	
UEENEEM030A	Maintain equipment in hazardous areas pressurisation	60
UEENEEM038A	Conduct testing of hazardous areas installations coal	40
	mining	
UEENEEM039A	Conduct testing of hazardous areas installations gas	40
	atmospheres	
UEENEEM040A	Conduct testing of hazardous areas installations dust	40
	atmospheres	40
UEENEEM041A	Conduct testing of hazardous area installations pressurisation	40
UEENEEM042A	Conduct visual inspection of hazardous areas	40
	installations	
UEENEEM076A	Use and maintain the integrity of a portable gas	20
	detection device	
UEENEEM077A	Install and maintain the integrity of fixed gas detection	20
	equipment	
UEENEEM080A	Report on the integrity of explosion-protected	20
	equipment in a hazardous area	
UEENEEN102A	Assemble and wire internal electrical rail signalling	30
	equipment	
UEENEEN103A	Install and maintain rail track circuit leads and bonds	30
UEENEEN104A	Test copper rail signalling cables	20
UEENEEN121A	Repair rail signalling power and control cables	40
UETTDRIS43A	Perform low voltage field switching operation to a	50
	given schedule	
UETTDRIS44A	Perform HV field switching operation to a given	50
	schedule	

UETTDRIS47A	Sample, test, filter and reinstate insulating oil	40
UETTDRIS67A	Solve problems in energy supply network equipment	80
UETTDRIS68A	Solve problems in energy supply network protection	40
	equipment and systems	
UETTDRSB23A	Install and maintain substation direct current systems	30
UETTDRSB29A	Maintain capacitor bank equipment for voltage	40
	regulation	
UETTDRSB39A	Perform power system substation switching operation	50
	to a given schedule	

UEE32211 - Certificate III in Air-conditioning and Refrigeration (Release 6)

Packaging Rules

Completion requirements

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

- All the Core competency standard units, defined in the Core Competency Standard Units table below and
- A combination of Elective competency standard units to achieve a total weighting of 60 points in accordance with the Elective Competency Standard Units table below.

Core Competency Standard Units		Weighting points
All Core competency		
UEENEEC025B	Participate in refrigeration and air conditioning work and	60
	competency development activities	
UEENEEE101A	Apply Occupational Health and Safety regulations, codes	20
	and practices in the workplace	
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40
	components	
UEENEEE103A	Solve problems in ELV single path circuits	40
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40
UEENEEE137A	Document and apply measures to control OHS risks	20
	associated with electrotechnology work	
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	30
UEENEEJ103A	Establish the basic operating conditions of vapour	60
	compression systems	
UEENEEJ104A	Establish the basic operating conditions of air	20
	conditioning systems	
UEENEEJ106A	Install refrigerant pipe work, flow controls and	60
	accessories	
UEENEEJ107A	Install air conditioning and refrigeration systems, major	80
	components and associated equipment	
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak test	60
	refrigerants	
UEENEEJ109A	Verify functionality and compliance of refrigeration and	20
	air conditioning installations	
UEENEEJ110A	Select refrigerant piping, accessories and associated	50
	controls	
UEENEEJ111A	Diagnose and rectify faults in air conditioning and	40
	refrigeration systems and components	
UEENEEJ113A	Commission air conditioning and refrigeration systems	40

UEENEEJ153A	Find and rectify faults in motors and associated controls	50
UEENEEJ170A	in refrigeration and air conditioning systems Diagnose and rectify faults in air conditioning and refrigeration control systems	70
UEENEEJ194A	Solve problems in low voltage refrigeration circuits	40
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	20
UEENEEP012A	Disconnect / reconnect composite appliances connected to low voltage installation wiring	60
UEENEEP017A	Locate and rectify faults in low voltage composite appliances using set procedures	20
UEENEEP024A	Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply	20
UEENEEP025A	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply	20
Total points in core		1000

Elective Competency Standard Units

Complete Elective units to achieve a total of weighting of 60 points from the following groups:

Gro	Group		Minimum points	Maximum points
Α	Imported and Cor	mmon Elective Units	0	30
	state accredited of group, but they m where the unit is f units have not being relevant EE-Oz Ind	om other training packages and/or ourses can be added to this nust be selected from qualifications first packaged at AQF level 3. If ng assigned a weighting by the dustry Technical Advisory weighting will be 10 points.		
В		ive Units You may select all your	30	60
	Group A Imported and Common Elective Units You may complete units to a maximum weighting of 30		Weighting Points	
	UEENEEC001B Maintain documentation		20	
UEE	UEENEEC002B Source and purchase material/parts for installation or service jobs		20	
UEE	ENEEC003B	Provide quotations for installation	or service jobs	20
UEE	ENEEC010B	Deliver a service to customers		20
UEE	ENEED101A	Use computer applications relevan	t to a workplace	20
UEE	UEENEEE009B Comply with scheduled and preventative maintenance program processes		20	
UEE	UEENEEE020B Provide basic instruction in the use of electrotechnology apparatus		20	
CPC	CCOHS1001A	Work safely in the construction ind	ustry	10

CPCPCM2043A	Carry out WHS requirements	40
CPCPMS3035A	Install and test ducting systems	10
HLTAID001	Provide cardiopulmonary resuscitation	10
HLTAID003	Provide first aid	10
	Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 3. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	Up to 30 points
	Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework	
Group B Qualification	Elective Units	Weighting
Complete units to s	inimum weighting of 20	Points
Complete units to a m	inimum weighting of 30	
 You may select all you	r elective units from this Group	
UEENEEI150A	Develop, enter and verify discrete control programs for	60
0221122113071	programmable controllers	
UEENEEJ114A	Resolve problems in hydronic systems	40
UEENEEJ115A	Resolve problems in beverage dispensers	40
UEENEEJ116A	Resolve problems in transport refrigeration systems	20
UEENEEJ117A	Resolve problems in ultra-low temperature refrigeration	20
	systems	
UEENEEJ118A	Resolve problems in post mix refrigeration systems	20
UEENEEJ119A	Resolve problems in ice making systems	20
UEENEEJ120A	Resolve problems in industrial refrigeration systems	20
UEENEEJ166A	Resolve problems in dairy refrigeration systems	20
UEENEEJ167A	Resolve problems in central plant air conditioning	40
	systems	
UEENEEJ168A	Maintain microbial control of refrigeration and air	20
	conditioning systems	
UEENEEJ171A	Resolve problems in refrigerated beverage vending	20
	cabinets	
UEENEEJ174A	Apply safety awareness and legal requirements for	10
	hydrocarbon refrigerants	
UEENEEJ175A	Service and repair self contained hydrocarbon air	20
	conditioning and refrigeration systems	
UEENEEJ176A	Install and commission hydrocarbon refrigeration	20
LIEFNIEF 1470 A	systems, components and associated equipment	10
UEENEEJ178A	Apply safety awareness and legal requirements for	10
	ammonia refrigerant	

UEENEEJ179A	Repair and service ammonia refrigeration systems	20
UEENEEJ180A	Install and commission ammonia refrigeration systems,	20
	components and associated equipment	
UEENEEJ182A	Repair and service secondary refrigeration systems	20
UEENEEJ184A	Apply safety awareness and legal requirements for	10
	carbon dioxide refrigerant	
UEENEEJ185A	Repair and service carbon dioxide refrigeration systems	20
UEENEEJ186A	Install and commission carbon dioxide refrigeration	20
	systems, components and associated equipment	
UEENEEJ188A	Repair and service self contained carbon dioxide	20
	refrigeration and heat pump systems	
UEENEEJ196A	Operate Ammonia Refrigeration Plant	40

UEE33011 - Certificate III in Electrical Fitting (Release 4)

Packaging Rules

Completion requirements

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

- All the Core competency standard units, defined in the Core Competency Standard Units table below and
- A combination of Elective competency standard units to achieve a total weighting of 240 points in accordance with the Elective Competency Standard Units table below.

Core Competency Standard Units		Weighting
All Core competency	standard units to be achieved	Points
UEENEEC020B	Participate in electrical work and competency development activities	60
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40
UEENEEE104A	Solve problems in d.c. circuits	80
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEG006A	Solve problems in single and three phase low voltage machines	80
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
UEENEEG106A	Terminate cables, cords and accessories for low voltage circuits	40
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	40
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEG199A	Conduct compliance and functional verification of electrical apparatus and existing circuits	40
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	20

Tot	al points in core			820
Elec	ctive Competency	Standard Units		
C	andaka Elaaki sa sa	::	:	
		nits to achieve a total of weighting of 240 pc	Minimum	Maximum
Gro	oup		points	points
Α	Imported and C	ommon Elective Units	0	60
' \		on the block of the		
	Imported units f	rom other training packages and/or state		
	•	ses can be added to this group, but they		
	must be selected	d from qualifications where the unit is first		
	, ,	F level 3. If units have not being assigned		
	3 3 ,	he relevant EE-Oz Industry Technical		
	•	ittee, their weighting will be 10 points.		
В	Qualification Ele	ctive Units	180	240
	Vou may calact	all your plactive units from this Croup		
Gro		all your elective units from this Group nd Common Elective Units		Weighting
Gic	rup A imported a	ild Common Elective Onlis		Points
Υοι	ı mav complete u	nits to a maximum weighting of 60		1 01113
	ENEEC001B	Maintain documentation		20
	ENEEC002B	Source and purchase material/parts for ins	stallation or	20
		service jobs		
UEE	ENEEC003B	Provide quotations for installation or service	ce jobs	20
UEE	ENEEC010B	Deliver a service to customers		20
UEE	ENEED101A	Use basic computer applications relevant t	to a workplace	20
UEE	ENEEE009B	Comply with scheduled and preventative r	maintenance	20
		program processes		
UEE	ENEEE020B	Provide basic instruction in the use of elec	trotechnology	20
CDO	COLIC1001A	apparatus		10
	CCOHS1001A	Work safely in the construction industry		10
	AID001 AID003	Provide cardiopulmonary resuscitation Provide first aid		10
ПЦ	AID003	Imported units from other training packag	uos and/or	Up to 60
		state accredited courses can be added to		points
		they must be selected from qualifications	J ,	Politis
		is first packaged at AQF level 3. If units have		
		assigned a weighting by the relevant EE-C	_	
		Technical Advisory Committee, their weigh	•	
		points.		
			_	
		Note: For further information see Applicat		
		NQC Flexibility Formula, UEE11 Electrotech		
		Training Package, Version 1, Volume 1 Qua Framework	alitication	
Gra	NUD R Ouglification			Moighting
J GIC	oup B Qualification	i Elective Offits		Weighting Points
				r Ollits

Complete units to	a minimum weighting of 180	
You may select all	your elective units from this Group	
UEENEEA110A	Assemble, mount and connect control gear and switchgear	40
JEENEEA112A	Fabricate and assemble bus bars	60
JEENEEA113A	Mount and wire control panel equipment	40
JEENEED104A	Use engineering applications software on personal computers	40
JEENEEF102A	Install and maintain cabling for multiple access to telecommunication services	120
JEENEEF104A	Install and modify performance data communication copper cabling	40
JEENEEF115A	Assemble and connect telecommunication frames and cabinets	60
JEENEEG110A	Find and repair faults in LV d.c. electrical apparatus and circuits	60
UEENEEG111A	Carry out basic repairs to electrical components and equipment	40
UEENEEG116A	Diagnose and rectify faults in traction lift systems	80
JEENEEG118A	Maintain operation of electrical mining equipment and systems	60
UEENEEG119A	Maintain operation of electrical marine equipment and systems	60
UEENEEG129A	Overhaul and repair major switchgear and controlgear	60
JEENEEG150A	Wind electrical coils	40
JEENEEG151A	Place and connect electrical coils	40
JEENEEG152A	Rewind single phase machines	40
JEENEEG153A	Rewind three phase low voltage induction machines	60
JEENEEG154A	Rewind LV direct current machines	60
JEENEEG157A	Conduct electrical tests on LV electrical machines	40
JEENEEG159A	Conduct mechanical tests on electrical machines and components	40
JEENEEG164A	Repair and maintain mechanical components of electrical machines	40
JEENEEG165A	Maintain and service traction lifts systems and equipment	40
JEENEEG166A	Install and maintain escalators, moving walks and treadways	40
Jeeneeg167A	Align and install traction lift equipment	20
JEENEEG181A	Provide advice on effective and energy efficient lighting products	20
JEENEEG182A	Supply effective and efficient lighting products for domestic and small commercial applications	40
UEENEEG183A	Provide advice on the application of energy efficient lighting for ambient and aesthetic effect	20

UEENEEH102A	Repairs basic electronic apparatus faults by replacement	40
	of components	
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40
UEENEEI101A	Use instrumentation drawings, specification, standards	40
	and equipment manuals	
UEENEEI102A	Solve problems in pressure measurement components	40
	and systems	
UEENEEI103A	Solve problems in density/level measurement	40
	components and systems	
UEENEEI104A	Solve problems in flow measurement components and	40
	systems	
UEENEEI105A	Solve problems in temperature measurement	40
	components and systems	
UEENEEI107A	Install instrumentation and control cabling and tubing	20
UEENEEI108A	Install instrumentation and control apparatus and	20
	associated equipment	
UEENEEI116A	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices	
UEENEEI150A	Develop, enter and verify discrete control programs for	60
	programmable controllers	
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	30
UEENEEJ103A	Establish the basic operating conditions of vapour	60
	compression systems	
UEENEEJ104A	Establish the basic operating conditions of air	20
	conditioning systems	
UEENEEJ105A	Position, assemble and start up single head split air	70
	conditioning and water heating heat pump systems	
UEENEEJ106A	Install refrigerant pipe work, flow controls and	60
	accessories	
UEENEEJ108A	Recover, pressure test, evacuate, charge and leak test	60
	refrigerants	60
UEENEEJ151A	Service small electrical appliances and power tools	60
UEENEEJ153A	Find and rectify faults in motors and associated controls	50
	in refrigeration and air conditioning systems	
UEENEEJ154A	Find and rectify faults in appliance control systems and	60
	devices	60
UEENEEJ155A	Service refrigeration appliances	60
UEENEEJ156A	Service clothes washing machines and dryers	40
UEENEEJ157A	Service electrical heating appliances	60
UEENEEJ158A	Service dishwasher machines	40
UEENEEJ159A	Service gas heating appliances	40
UEENEEJ162A	Recover, pressure test, evacuate, charge and leak test	50
	refrigerants - appliances	70
UEENEEJ170A	Diagnose and rectify faults in air conditioning and	70
LIEENIEE 1470 A	refrigeration control systems	40
UEENEEJ173A	Service and repair microwave ovens	40

UEENEEJ194A	Solve problems in low voltage refrigeration circuits	40
UEENEEJ195A	Establish the basic operating conditions of vapour	50
	compression systems - appliances	
UEENEEM019A	Attend to breakdowns in hazardous areas coal mining	20
UEENEEM020A	Attend to breakdowns in hazardous areas gas	20
	atmospheres	
UEENEEM021A	Attend to breakdowns in hazardous areas dust	20
	atmospheres	
UEENEEM022A	Attend to breakdowns in hazardous areas pressurisation	20
UEENEEM027A	Maintain equipment in hazardous areas coal mining	60
UEENEEM028A	Maintain equipment in hazardous areas gas	60
	atmospheres	
UEENEEM029A	Maintain equipment in hazardous areas dust	60
	atmospheres	
UEENEEM030A	Maintain equipment in hazardous areas pressurisation	60
UEENEEM031A	Overhaul and repair of explosion-protected equipment	60
	coal mining	
UEENEEM032A	Overhaul and repair of explosion-protected equipment	60
	flameproof enclosures	
UEENEEM033A	Overhaul and repair of explosion-protected equipment	60
	gas atmospheres	
UEENEEM034A	Overhaul and repair of explosion-protected equipment	40
	dust atmospheres	
UEENEEM060A	Carry out overhaul and repair of explosion-protected	60
	equipment coal mining	
UEENEEM061A	Carry out overhaul and repair of explosion-protected	60
	equipment flameproof enclosures	
UEENEEM062A	Carry out overhaul and repair of explosion-protected	60
	equipment gas atmospheres	
UEENEEM063A	Carry out overhaul and repair of explosion-protected	60
	equipment dust atmospheres	
UEENEEM070A	Repair reeling, trailing and flexible cables	60
UEENEEM071A	Test reeling, trailing and flexible cables	60
UEENEEM072A	Inspect and fit plugs/couplers for reeling, trailing and	60
	flexible cables	
UEENEEM073A	Verify compliance of repaired reeling, trailing and flexible	60
	cables	
UEENEEM076A	Use and maintain the integrity of a portable gas	20
	detection device	
UEENEEM077A	Install and maintain the integrity of fixed gas detection	20
	equipment	
UEENEEM080A	Report on the integrity of explosion-protected	20
	equipment in a hazardous area	
UEENEEN102A	Assemble and wire internal electrical rail signalling	30
	equipment	
UEENEEN104A	Test copper rail signalling cables	20

UEENEEN121A	Repair rail signalling power and control cables	40
UEENEEP010A	Disconnect - reconnect appliances connected to low voltage installation wiring	60
UEENEEP011A	Disconnect - reconnect neon signs connected to low voltage installation wiring	60
UEENEEP014A	Disconnect - reconnect water heaters connected to low voltage installation wiring	60
UEENEEP016A	Locate and rectify faults in low voltage appliances using set procedures	20
UEENEEP019A	Locate and rectify faults in low voltage water heaters using set procedures	20
UEENEEP021A	Disconnect - reconnect explosion-protected appliances and control devices connected to low voltage installation wiring	60
UEENEEP022A	Disconnect and reconnect 3.3 kV electric propulsion components of self-propelled earth moving vehicles	60
UEENEEP023A	HV Flexible Cables and Plugs	40
UETTDRIS43A	Perform low voltage field switching operation to a given schedule	50
UETTDRIS44A	Perform HV field switching operation to a given schedule	40
UETTDRIS47A	Sample, test, filter and reinstate insulating oil	40
UETTDRIS67A	Solve problems in energy supply network equipment	80
UETTDRIS68A	Solve problems in energy supply network protection equipment and systems	40
UETTDRSB29A	Maintain capacitor bank equipment for voltage regulation	40
UETTDRSB39A	Perform power system substation switching operation to a given schedule	50

UEE32020 - Certificate III in Renewable Energy - ELV (Release 1)

Packaging Rules

A total of 1060 weighting points comprising:

700 core weighting points listed below; plus

360 general elective weighting points from the general elective units listed below.

Choose a total of 360 weighting points elective units from the list below, of which between 0 and 170 weighting points can be taken from Group A; and between 190 and 360 weighting points can be taken from Group B; or all electives units of 360 weighting points can be taken from Group B.

Up to 170 weighting points of the general elective units Group A , may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided that selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points unless, directed from the Electrotechnology Industry Reference Committee (IRC).

There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

Where imported units are selected, care must be taken to ensure all pre-requisite units specified are complied with.

Core units		Weighting Points
UEECD0007	Apply work health and safety regulations, codes and practices in the workplace	20
UEECD0016	Document and apply measures to control WHS risks associated with electrotechnology work*	20
UEECD0019	Fabricate, assemble and dismantle utilities industry components*	40
UEECD0020	Fix and secure electrotechnology equipment*	20
UEECD0025	Lay wiring/cabling and terminate accessories for extra- low voltage (ELV) circuits*	40
UEECD0043	Solve problems in direct current circuits*	80
UEECD0045	Solve problems in multiple path extra-low voltage (ELV) a.c. circuits*	40
UEECD0051	Use drawings, diagrams, schedules, standards, codes and specifications*	40
UEECO0007	Participate in electronics and communications work and competency development activities	60

UEEEL0019	Solve problems in direct current (d.c.) machines*	30
UEEEL0021	Solve problems in magnetic and electromagnetic devices*	30
UEERE0001	Apply environmentally and sustainable procedures in the energy sector	20
UEERE0022	Solve basic problems in photovoltaic energy apparatus and systems*	20
UEERE0025	Carry out basic repairs to renewable energy (RE) apparatus*	80
UEERE0034	Diagnose and rectify faults in renewable energy (RE) control systems*	60
UEERE0046	Solve problems in stand-alone renewable energy (RE) systems*	60
UEERE0048	Verify compliance and functionality of an extra-low voltage renewable energy installation*	40
Group A: Imported	d and common elective units.	Weighting Points
BSBCUS201	Deliver a service to customers	20
CPCCWHS1001	Prepare to work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
HLTAID003	Provide first aid	10
ICTICT203	Operate application software packages	20
UEECD0011	Comply with scheduled and preventative maintenance program processes	20
UEECD0035	Provide basic instruction in the use of electrotechnology apparatus	20
UEECO0002	Maintain documentation	20
UEECO0015	Provide quotations for installation or service jobs	20
UEECO0017	Source and purchase material/parts for installation or service jobs	20
Group B: Qualifica	tion elective units.	Weighting Points
UEERE0006	Conduct periodic maintenance of remote area power supply battery banks*	40
UEERE0007	Conduct periodic maintenance of remote area power supply generator sets*	40
UEERE0008	Conduct periodic maintenance of remote area power supply photovoltaic arrays*	40
UEERE0009	Conduct periodic maintenance of remote area power supply wind generators*	40
UEERE0017	Maintain and repair facilities associated with remote area essential service operations*	120
UEERE0018	Maintain and repair remote area power generation facilities*	120
UEERE0019	Maintain safety and tidiness of remote area power supply systems*	20
UEERE0023	Work safely with remote area power supply systems*	20

UEERE0024	Attend to breakdowns in remote area power supplies (RAPS)*	20
UEERE0026	Conduct checks in the demand side use of remote area power supplies (RAPS)*	40
UEERE0035	Install ELV stand-alone photovoltaic power systems*	60
UEERE0036	Install small wind energy conversion systems rated up to 10 kW for ELV stand-alone applications*	20
UEERE0039	Install, set up and maintain ELV micro-hydro systems rated up to 6.4 kW*	20
UEERE0041	Maintain operation of remote area power generation plant*	120
UEERE0043	Plan periodic maintenance schedules of remote area power supplies (RAPS)*	40
UEERE0045	Solve basic problems in micro-hydro systems*	20
UEERE0047	Solve problems in wind energy conversion systems (WECS) rated up to 10 kW*	60
UEERL0001	Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply*	20
UEERL0002	Attach cords, cables and plugs to electrical equipment for connection to 1000 V a.c. or 1500 V d.c.*	20
UEERL0003	Conduct in-service safety testing of electrical cord connected equipment and cord assemblies*	20

UEE30820 - Certificate III in Electrotechnology Electrician (Release 1)

Packaging Rules

A total of 1,110 weighting points comprising:

990 core weighting points listed below; plus

120 general elective weighting points.

General elective weighting points are to be selected from the Group A general elective units listed below, or **up to 40 general elective weighting points**, may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided that selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training Package Companion Volume Implementation Guide (CVIG), if not listed, weighting points will be 10 points.

There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

Where imported units are selected, care must be taken to ensure all pre-requisite units specified are complied with.

Core units		Weighting Points
HLTAID001	Provide cardiopulmonary resuscitation	10
UEECD0007	Apply work health and safety regulations, codes and practices in the workplace	20
UEECD0016	Document and apply measures to control WHS risks associated with electrotechnology work*	20
UEECD0019	Fabricate, assemble and dismantle utilities industry components*	40
UEECD0020	Fix and secure electrotechnology equipment*	20
UEECD0044	Solve problems in multiple path circuits*	40
UEECD0046	Solve problems in single path circuits*	40
UEECD0051	Use drawings, diagrams, schedules, standards, codes and specifications*	40
UEECO0023	Participate in electrical work and competency development activities	60
UEEEL0003	Arrange circuits, control and protection for electrical installations*	40
UEEEL0005	Develop and connect electrical control circuits*	80
UEEEL0008	Evaluate and modify low voltage heating equipment and controls*	20
UEEEL0009	Evaluate and modify low voltage lighting circuits, equipment and controls*	20

UEEEL0010	Evaluate and modify low voltage socket outlets circuits*	20
UEEEL0012	Install low voltage wiring, appliances, switchgear and associated accessories*	40
UEEEL0014	Isolate, test and troubleshoot low voltage electrical circuits*	60
UEEEL0018	Select wiring systems and select cables for low voltage electrical installations*	60
UEEEL0019	Solve problems in direct current (d.c.) machines*	30
UEEEL0020	Solve problems in low voltage a.c. circuits*	80
UEEEL0021	Solve problems in magnetic and electromagnetic devices*	30
UEEEL0023	Terminate cables, cords and accessories for low voltage circuits*	40
UEEEL0024	Test and connect alternating current (a.c.) rotating machines*	50
UEEEL0025	Test and connect transformers*	30
UEEEL0039	Design, install and verify compliance and functionality of general electrical installations*	40
UEEEL0047	Identify, shut down and restart systems with alternate supplies*	20
UEERE0001	Apply environmentally and sustainable procedures in the energy sector	20
UETTDRRF06	Perform rescue from a live LV panel*	20
Group A General	elective units	Weighting Points
Group A General UEEAS0007	elective units Assemble, mount and connect control gear and switchgear*	Weighting Points 40
	Assemble, mount and connect control gear and	
UEEAS0007	Assemble, mount and connect control gear and switchgear*	40
UEEAS0007 UEEAS0008	Assemble, mount and connect control gear and switchgear* Fabricate and assemble bus bars*	40
UEEAS0007 UEEAS0008 UEEAS0009	Assemble, mount and connect control gear and switchgear* Fabricate and assemble bus bars* Mount and wire control panel equipment*	40 40 40
UEEAS0007 UEEAS0008 UEEAS0009 UEECD0028	Assemble, mount and connect control gear and switchgear* Fabricate and assemble bus bars* Mount and wire control panel equipment* Plan an integrated cabling installation system* Use and maintain the integrity of a portable gas	40 40 40 40
UEEAS0007 UEEAS0008 UEEAS0009 UEECD0028 UEECD0050	Assemble, mount and connect control gear and switchgear* Fabricate and assemble bus bars* Mount and wire control panel equipment* Plan an integrated cabling installation system* Use and maintain the integrity of a portable gas detection device* Use engineering applications software on personal	40 40 40 40 20
UEEAS0007 UEEAS0008 UEEAS0009 UEECD0028 UEECD0050 UEECS0033	Assemble, mount and connect control gear and switchgear* Fabricate and assemble bus bars* Mount and wire control panel equipment* Plan an integrated cabling installation system* Use and maintain the integrity of a portable gas detection device* Use engineering applications software on personal computers Install and maintain cabling for multiple access to telecommunication services* Install, modify and verify coaxial and structured	40 40 40 40 20 40
UEEAS0007 UEEAS0008 UEEAS0009 UEECD0028 UEECD0050 UEECS0033 UEEDV0005	Assemble, mount and connect control gear and switchgear* Fabricate and assemble bus bars* Mount and wire control panel equipment* Plan an integrated cabling installation system* Use and maintain the integrity of a portable gas detection device* Use engineering applications software on personal computers Install and maintain cabling for multiple access to telecommunication services*	40 40 40 40 20 40 80
UEEAS0007 UEEAS0008 UEEAS0009 UEECD0028 UEECD0050 UEECS0033 UEEDV0005	Assemble, mount and connect control gear and switchgear* Fabricate and assemble bus bars* Mount and wire control panel equipment* Plan an integrated cabling installation system* Use and maintain the integrity of a portable gas detection device* Use engineering applications software on personal computers Install and maintain cabling for multiple access to telecommunication services* Install, modify and verify coaxial and structured communication copper cabling* Assemble and set up basic security systems* Repairs basic electronic apparatus faults by	40 40 40 40 20 40 80
UEEAS0007 UEEAS0008 UEEAS0009 UEECD0028 UEECD0050 UEECS0033 UEEDV0005 UEEDV0008 UEEEC0003	Assemble, mount and connect control gear and switchgear* Fabricate and assemble bus bars* Mount and wire control panel equipment* Plan an integrated cabling installation system* Use and maintain the integrity of a portable gas detection device* Use engineering applications software on personal computers Install and maintain cabling for multiple access to telecommunication services* Install, modify and verify coaxial and structured communication copper cabling* Assemble and set up basic security systems* Repairs basic electronic apparatus faults by replacement of components*	40 40 40 40 20 40 80
UEEAS0007 UEEAS0008 UEEAS0009 UEECD0028 UEECD0050 UEECS0033 UEEDV0005 UEEDV0008 UEEEC0003 UEEEC0060	Assemble, mount and connect control gear and switchgear* Fabricate and assemble bus bars* Mount and wire control panel equipment* Plan an integrated cabling installation system* Use and maintain the integrity of a portable gas detection device* Use engineering applications software on personal computers Install and maintain cabling for multiple access to telecommunication services* Install, modify and verify coaxial and structured communication copper cabling* Assemble and set up basic security systems* Repairs basic electronic apparatus faults by	40 40 40 40 20 40 80 40

energy efficient 20 components of 40
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nting products for 40
applications*
pment* 20
ectrical machines* 40
ectrical machines and 40
ction lift systems* 80
electrical apparatus 60
lighting systems* 40
safety systems* 60
systems and 40
marine equipment and 60
mining equipment and 60
hgear and control 60
5* 40
n of energy efficient 20
ic effect*
nes* 60
40
induction machines* 60
or special LV electrical 60
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40
electrical installations 40
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tion requirements to 40
dous area*
a to undertake work 40
oment and associated 60
with hazardous areas* 60
ating instructions in 20
es*

UEEIC0013	Develop, enter and verify discrete control programs	60
	for programmable controllers*	
UEEIC0015	Develop, enter and verify word and analogue control	60
	programs for programmable logic controllers*	
UEEIC0024	Plan the electrical installation of integrated systems*	20
UEEIC0038	Solve problems in density/level measurement	40
	components and systems*	
UEEIC0039	Solve problems in flow measurement components and	40
	systems*	
UEEIC0041	Solve problems in pressure measurement components	40
	and systems*	
UEEIC0043	Solve problems in temperature measurement	40
	components and systems*	
UEEIC0047	Use instrumentation drawings, specifications,	40
	standards and equipment manuals*	
UEERA0035	Establish the basic operating conditions of air	20
	conditioning systems*	
UEERA0036	Establish the basic operating conditions of vapour	60
	compression systems*	
UEERA0049	Install and start up single head split air conditioning	70
	and water heating heat pump systems*	
UEERA0059	Prepare and connect refrigerant tubing and fittings*	40
UEERA0064	Recover, pressure test, evacuate, charge and leak test	60
LIEEDEOOAG	refrigerants - split systems*	10
UEERE0016	Install, configure and commission LV grid-connected	40
LIEEDEGGG	photovoltaic power systems*	0.0
UEERE0022	Solve basic problems in photovoltaic energy apparatus and systems*	20
UEERS0001	Assemble and wire internal electrical rail signalling	30
OLLINGOOOT	equipment*	30
UEERS0011	Install and maintain rail track circuit leads and bonds*	30
UEERS0017	Repair rail signalling power and control cables*	40
UEERS0019	Test copper rail signalling cables*	20
UETTDRIS43	Perform low voltage field switching operation to a	50
02112111313	given schedule*	
UETTDRIS44	Perform HV field switching operation to a given	40
0211011	schedule*	
UETTDRIS47	Sample, test, filter and reinstate insulating oil*	40
UETTDRIS67	Solve problems in energy supply network equipment*	80
UETTDRIS68	Solve problems in energy supply network protection	40
	equipment and systems*	
UETTDRSB23	Install and maintain substation direct current systems*	30
UETTDRSB29	Maintain capacitor bank equipment for voltage	40
1	regulation*	-
UETTDRSB39	Perform power system substation switching operation	50
	to a given schedule*	

UEE30920 - Certificate III in Electronics and Communications (Release 1)

Packaging Rules

A total of 1060 weighting points comprising:

680 core weighting points listed below; plus

380 elective weighting points from the elective units listed below.

Up to 180 weighting points of the general elective units Group A, may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points, unless directed from the Electrotechnology Industry Reference Committee (IRC).

There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

Where imported units are selected, care must be taken to ensure all pre-requisite units specified are complied with.

Core units		Weighting Points
UEECD0007	Apply work health and safety regulations, codes and practices in the workplace	20
UEECD0016	Document and apply measures to control WHS risks associated with electrotechnology work*	20
UEECD0019	Fabricate, assemble and dismantle utilities industry components*	40
UEECD0043	Solve problems in direct current circuits*	80
UEECO0007	Participate in electronics and communications work and competency development activities	60
UEEEC0028	Fault find and repair complex power supplies*	40
UEEEC0060	Repairs basic electronic apparatus faults by replacement of components*	40
UEEEC0063	Solve fundamental electronic communications system problems*	40
UEEEC0066	Troubleshoot amplifiers in an electronic apparatus*	80
UEEEC0067	Troubleshoot basic amplifier circuits*	40
UEEEC0069	Troubleshoot digital sub-systems*	80
UEEEC0074	Troubleshoot resonance circuits in an electronic apparatus*	80
UEEEC0075	Troubleshoot single phase input d.c power supplies*	40

UEERE0001	Apply environmentally and sustainable procedures in	20
Group A: Import	the energy sector ed and common elective units.	Weighting Points
BSBCUS201	Deliver a service to customers	20
HLTAID003	Provide first aid	10
ICTICT203	Operate application software packages	20
ICTTEN312	Install telecommunications network equipment	40
MSS402001	Apply competitive systems and practices	20
MSS402001	Apply quick changeover procedures	20
MSS402020	Apply Just in Time procedures	20
MSS402040	Apply 5S procedures	20
MSS402040	Undertake root cause analysis	20
MSS402080	Contribute to the application of a proactive	20
10133402001	maintenance strategy	20
UEEAS0001	Assemble electronic components*	40
UEEAS0001	Conduct quality and functional tests on assembled	20
ULLA30002	electronic apparatus*	20
UEEAS0003	Modify electronic sub-assemblies*	40
UEEAS0004	Select electronic components for assembly*	20
UEEAS0005	Set up and check electronic component assembly	40
	machines*	
UEEAS0006	Use lead-free soldering techniques*	40
UEECD0008	Carry out preparatory energy sector work activities*	60
UEECD0011	Comply with scheduled and preventative maintenance	20
	program processes	
UEECD0020	Fix and secure electrotechnology equipment*	20
UEECD0021	Identify and select components, accessories and	20
	materials for energy sector work activities*	
UEECD0025	Lay wiring/cabling and terminate accessories for extra-	40
	low voltage (ELV) circuits*	
UEECD0028	Plan an integrated cabling installation system*	40
UEECD0035	Provide basic instruction in the use of	20
	electrotechnology apparatus	
UEECD0040	Solve basic problems electronic and digital equipment	80
LIEE CDOOE1	and circuits*	40
UEECD0051	Use drawings, diagrams, schedules, standards, codes	40
LIFECONON	and specifications*	20
UEECO0002	Maintain documentation	20
UEECO0015	Provide quotations for installation or service jobs	20
UEECO0017	Source and purchase material/parts for installation or service jobs	20
UEEEC0046	Operate and maintain amateur radio communication stations*	40
UEECS0003	Assemble, set up and test computing devices*	80
UEECS0018	Develop web pages for engineering applications	40
UEECS0020	Evaluate and modify object-oriented code programs	40

UEECS0022	Install and configure a client computer operating	40
LIFFCCOOSO	system and software	40
UEECS0028	Select, install, configure and test multimedia components	40
UEECS0029	Set up and configure basic local area network (LAN)*	80
UEECS0030	Set up, configure and test biometric devices	40
UEECS0032	Support computer hardware and software for	120
	engineering applications	
UEECS0033	Use engineering applications software on personal	40
	computers	
UEEDV0004	Install and connect data and voice communication	40
	equipment*	
UEEDV0005	Install and maintain cabling for multiple access to	80
	telecommunication services*	
UEEDV0006	Install and modify optical fibre performance data	40
	communication cabling*	
UEEDV0008	Install, modify and verify coaxial and structured	40
	communication copper cabling*	
UEEDV0009	Select and arrange data and voice equipment for local	40
	area networks*	
UEEDV0010	Select and arrange equipment for wireless	40
	communication networks*	
UEEDV0011	Set up and configure basic data communication	40
	systems*	
UEEDV0012	Set up and configure the wireless capabilities of	40
	communications and data storage devices	
UEEDV0013	Solve problems in voice and data communications	40
	circuits*	
UEEDV0014	Test, report and rectify faults in data and voice	40
	installations*	
UEEEC0002	Assemble and install reception antennae and signal	60
	distribution equipment*	
UEEEC0003	Assemble and set up basic security systems*	80
UEEEC0004	Assemble and set up fixed video/audio components	120
	and systems in buildings and premises*	
UEEEC0006	Carry out repairs of predictable faults in video and	120
	audio replay/recording apparatus*	
UEEEC0008	Commission large fire protection systems*	40
UEEEC0019	Develop software solutions for microcontroller-based	60
	systems*	
UEEEC0026	Enter and verify programs for fire protection systems*	40
UEEEC0027	Enter instructions and test wired and wireless security	40
	systems*	
UEEEC0029	Fault find and repair electronic apparatus*	40
UEEEC0032	Fault find and repair high-volume office equipment*	120

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UEEEC0038	Find and repair microwave amplifier section faults in	40
UEEEC0039	electronic apparatus* Install and test microwave antennae and waveguides*	60
UEEEC0040	Install commercial video/audio system components*	120
UEEEC0040	Install fire detection and warning system apparatus*	40
UEEEC0042	Install large security systems*	100
UEEEC0048	Program and commission commercial access control	60
OLLLC0040	security systems*	00
UEEEC0049	Program and commission commercial security closed-	60
	circuit television systems*	
UEEEC0050	Program and commission commercial security	60
	systems*	
UEEEC0055	Repair basic computer equipment faults by	40
	replacement of modules/sub-assemblies*	
UEEEC0056	Repair predictable faults in audio components*	40
UEEEC0057	Repair predictable faults in general electronic	40
	apparatus*	
UEEEC0058	Repair predictable faults in television receivers*	120
UEEEC0059	Repair routine business equipment faults*	120
UEEEC0061	Set up and adjust commercial radio frequency (RF)	60
	transmission and reception systems*	
UEEEC0062	Set up and test residential video/audio equipment*	40
UEEEC0064	Solve oscillator problems*	40
UEEEC0065	Solve problems in basic electronic circuits*	100
UEEEC0068	Troubleshoot communication systems*	80
UEEEC0070	Troubleshoot faults in television receivers*	120
UEEEC0071	Troubleshoot fire protection systems*	40
UEEEC0072	Troubleshoot microcontroller-based hardware systems	40
UEEEC0073	Troubleshoot professional audio reproduction	120
	components*	
UEEEC0076	Verify compliance and functionality of fire protection	60
	system installations*	
UEEEC0077	Verify functionality and compliance of custom	40
	electronic installations*	
UEEIC0002	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices*	
UEEIC0004	Calibrate, adjust and test measuring instruments*	40
UEEIC0012	Develop structured programs to control external	40
	devices*	
UEEIC0013	Develop, enter and verify discrete control programs	60
	for programmable controllers*	
UEEIC0047	Use instrumentation drawings, specifications, standards	40
	and equipment manuals*	
UEERL0001	Attach cords and plugs to electrical equipment for	20
	connection to a single phase 230 Volt supply*	

UEERL0002	Attach cords, cables and plugs to electrical equipment	20
	for connection to 1000 V a.c. or 1500 V d.c.*	
UEERL0004	Disconnect - reconnect electrical equipment	60
	connected to low voltage (LV) installation wiring*	
UEERL0005	Locate and rectify faults in low voltage (LV) electrical	20
	equipment using set procedures*	

UEG30120 - Certificate III in Gas Supply Industry Operations (Release 2)

Packaging Rules

A total of 960 weighting points comprising:

300 core weighting points listed below; plus

660 elective weighting points from the elective units listed below.

Choose a minimum of 660 weighting points elective units from the list below, of which between 0 and 160 weighting points can be taken from Group A, between 0 and 180 weighting points can be taken from Group B, between 0 and 130 weighting points can be taken from Group C:

Up to 160 weighting points of the elective units Group A , may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEG CVIG, if not listed weighting points will be 10 points unless directed from the Gas Industry Reference Committee (IRC). The general elective units must contribute to the vocational outcomes of the qualification.

Where imported units are selected, care must be taken to ensure all prerequisite units specified are complied with.

Where a prerequisite unit is attached to a unit, it is identified by this symbol \bot

Core units		Weighting Points
BSBLDR301	Support effective workplace relationships	40
BSBPEF301	Organise personal work priorities	40
BSBWHS311	Assist with maintaining workplace safety	40
BSBXTW301	Work in a team	40
UEGNSG005	Prepare to work in the gas industry	20
UEGNSG132	Carry out basic work activities in a gas industry work	60
	environment	
UEGNSG133	Comply with environmental policies and procedures in	40
	the utilities industry	
UEGNSG141	Apply workplace health and safety regulations, codes	20
	and practices in the gas supply industry	
Group A: Importe	d and common elective units	Weighting Points
AVIW0006	Perform infrastructure inspections using remote	60
	operated systems	
BSBHRM413	Support the learning and development of teams and	40
	individuals	
BSBOPS301	Maintain business resources	40
BSBOPS402	Coordinate business operational plans	40
BSBSTR301	Contribute to continuous improvement	40
BSBSTR401	Promote innovation in team environments	40

BSBWHS308	Participate in WHS hazard identification, risk	50
DSDVVUSSUO	assessment and risk control processes	30
CPCCLDG3001	Licence to perform dogging	30
CPCCLRG3001	Licence to perform rigging basic level	40
CI CCLINGSOOT	LCPCCLDG3001 Licence to perform dogging	40
CPCCLRG3002	Licence to perform rigging intermediate level	40
CI CCLINGSOOL	LCPCCLRG3001 Licence to perform rigging basic level	10
CPCCWHS1001	Prepare to work safely in the construction industry	10
CPPFES2005A	Demonstrate first attack firefighting equipment	15
HLTAID009	Provide cardiopulmonary resuscitation	10
HLTAID011	Provide First Aid	10
HLTAID013	Provide First Aid in remote or isolated site	10
HLTWHS005	Conduct manual tasks safely	20
ICTICT214	Operate application software packages	20
MEM05004	Perform routine oxy fuel gas welding	20
	∟MEM11011 Undertake manual handling	
	Ç	
	∟MEM13015 Work safely and effectively in	
	manufacturing and engineering	
	∟MEM16006 Organise and communicate information	
MEM05012	Perform routine manual metal arc welding	20
	∟MEM11011 Undertake manual handling	
	MENMOORE MALE COLUMN CO	
	∟MEM13015 Work safely and effectively in	
	manufacturing and engineering	
	∟MEM16006 Organise and communicate information	
MEM05015	Weld using manual metal arc welding process	40
IVILIVIOSOIS	∟MEM05012 Perform routine manual metal arc welding	40
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	∟MEM05051 Select welding processes	
	Lividiviosos i select welaling processes	
	∟MEM05052 Apply safe welding practices	
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	∟MEM09002 Interpret technical drawing	
	∟MEM11011 Undertake manual handling	
	∟MEM12023 Perform engineering measurements	
	∟MEM12024 Perform computations	
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	MEN 11304E M. 1 (1 1 1 (1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	∟MEM13015 Work safely and effectively in	
	manufacturing and engineering	
	∟MEM14006 Plan work activities	
	∟MEM16006 Organise and communicate information	I
	∟MEM18001 Use hand tools	
	∟MEM18002 Use power tools/hand held operations	
MSMPER200	Work in accordance with an issued permit	20
MSMPER201	Monitor and control work permits	20
MSMPER202	Observe permit work	20
MSMPER300	Issue work permits	20
	∟MSMWHS201 Conduct hazard analysis	
MSMPER400	Coordinate permit process	30
	∟MSMPER300 Issue work permits	
MSMPMC400	Carry out stock control	20
MSMSUP200	Achieve work outcomes	30
MSMSUP210	Process and record information	30
MSMSUP240	Undertake minor maintenance	30
MSMSUP303	Identify equipment faults	40
MSMSUP390	Use structured problem-solving tools	40
MSMWHS110		20
MSMWHS205	Follow emergency response procedures Control minor incidents	30
		20
MSMWHS216	Operate breathing apparatus	
MSMWHS217	Gas test atmospheres	30
MSS402061	Use SCADA systems in operations	30
MSS402080	Undertake root cause analysis	50
PMAOMIR210	Control evacuation to muster point	20
PMAOMIR346	Assess and secure an incident site	30
PMAOPS223	Operate and monitor valve systems	40
PMAOPS315	Operate and troubleshoot process control systems	60
PMAOPS317	Undertake ship transfer operations	40
PMAOPS338	Communicate and monitor pipeline activities	40
PMASUP311	Operate communications hub	40
PMAWHS211	Prepare equipment for emergency response	20
PMAWHS310	Investigate incidents	30
PMAWHS311	Lead emergency teams	20
PMBWELD301	Butt weld polyethylene plastic pipelines	20
PMBWELD302	Electrofusion weld polyethylene pipelines	20
RIICCM205E	Carry out manual excavation	10
RIICCM206D	Support plant operations	10
RIICCM207D	Spread and compact materials manually	10
RIICCM208D	Carry out basic levelling	10
RIICCM210D	Install trench support	15

RIICRC208D	Lay pipes	40
RIIHAN309F	Conduct telescopic materials handler operations	80
RIIMPO304E	Conduct wheel loader operations	40
RIIMPO308F	Conduct tracked dozer operations	40
RIIMPO309F	Conduct wheeled dozer operations	40
RIIMPO318F	Conduct civil construction skid steer loader operations	70
RIIMPO319E	Conduct backhoe/loader operations	50
RIIMPO320F	Conduct civil construction excavator operations	80
RIISAM201E	Handle resources and infrastructure materials and	15
	safely dispose of nontoxic materials	
RIIWHS202E	Enter and work in confined spaces	30
RIIWHS204E	Work safely at heights	20
RIIWHS205E	Control traffic with stop-slow bat	10
RIIWHS302E	Implement traffic management plans	20
RIIWMG203D	Drain and dewater civil construction site	20
TLIB0002	Carry out vehicle inspection	20
TLIC0003	Operate LP gas tanker	40
12.0003	∟TLILIC0001 Licence to transport dangerous goods by	
	road	
TLIC2002	Drive light rigid vehicle	40
TLIC2025	Operate four wheel drive vehicle	40
TLIC3003	Drive medium rigid vehicle	40
TLIC3004	Drive heavy rigid vehicle	40
TLIC3005	Drive heavy combination vehicle	40
TLID2003	Handle dangerous goods/hazardous substances	40
TLID2010	Operate a forklift	40
TLID2016	Load and unload explosives/dangerous goods	30
TLID3015	Identify and label explosives/dangerous goods	20
TLID3023	Use specialised liquid bulk gas transfer equipment	40
TLID3027	Prepare for transport of dangerous goods	50
TLID3033	Operate a vehicle-mounted loading crane	40
TLID3036	Lift and move load using a mobile crane	40
TLIF2006	Apply accident-emergency procedures	20
TLIF2010	Apply fatigue management strategies	30
TLIF2012	Apply safe procedures when handling/transporting	30
1211 2012	dangerous goods or explosives	30
TLILIC0001	Licence to transport dangerous goods by road	50
TLILIC0002	Licence to operate a vehicle loading crane (capacity 10	40
TETETCOOOL	metre tonnes and above)	
TLILIC0003	Licence to operate a forklift truck	40
TLILIC0008	Licence to operate a non-slewing mobile crane (greater	60
1.2.12.0000	than 3 tonnes capacity)	
TLILIC0010	Licence to operate a slewing mobile crane (up to 20	70
121210010	tonnes)	'
TLILIC0013	Licence to operate a slewing mobile crane (up to 60	70
1.2.12.0013	tonnes)	
	(C) (11 (C))	

TLILIC2014	Licence to drive a light rigid vehicle	40
TLILIC2015	Licence to drive a medium rigid vehicle	40
TLILIC2016	Licence to drive a heavy rigid vehicle	50
TLILIC3017	Licence to drive a heavy combination vehicle	60
TLILIC3018	Licence to drive a multi-combination vehicle	60
UEECO0002	Maintain documentation	20
Group B: General	elective units	Weighting Points
UEECD0007	Apply work health and safety regulations, codes and	20
	practices in the workplace	
UEECD0019	Fabricate, assemble and dismantle utilities industry	40
	components	
	regulations, codes and practices in the workplace	
UEECD0051	Use drawings, diagrams, schedules, standards, codes	40
	and specifications	
	□ UEECD0007 Apply work health and safety	
	regulations, codes and practices in the workplace	
UEGNSG004	Locate, prove and protect utility assets	60
UEGNSG006	Use a portable gas detector to locate escape	40
UEGNSG134	Establish a utilities infrastructure work site	60
UEGNSG136	Carry out transmission pipeline construction work	60
	activities	
UEGNSG140	Apply environmental policies and procedures in the	20
	utilities industry	
UEGNSG203	Evaluate and extinguish gas fire	20
UEGNSG219	Conduct excavations in the utilities industry	60
UEGNSG221	First on site response to gas pipeline emergencies	90
	∟ CPPFES2005A Demonstrate first attack firefighting	
	equipment	
	LUTAIDOOD D I. C I	
	∟ HLTAID003 Provide first aid	
	LIECNICC1/11 Apply workplace health and cafety	
	□ UEGNSG141 Apply workplace health and safety regulations, codes and practices in the gas supply	
UEGNSG224	industry Construct and lay copper and stainless steel gas	60
ULUNJUZZ4	distribution pipelines	00
UEGNSG226	Assist with the construction, laying and connection of	40
01430220	gas distribution services to mains	
UEGNSG227	Assist with the construction and laying of gas	40
OLGI VOGELI	distribution mains	
UEGNSG330	Coat metallic pipelines	80
UEGNSG331	Establish right of way access for transmission pipeline	60
0201400001	construction	
	CONSTRUCTION	

UEGNSG333	Work in proximity of transmission pipeline construction	40
	plant and equipment	
UEGNSG342	Maintain pipeline easements	40
UEGNSG615	Fill LPG cylinders	80
UEGNSG616	Refurbish gas cylinders	80
UEGNSG705	Disconnect and reconnect small capacity gas meters	40
UEGNSG708	Pressure test residential and small commercial gas	40
	installations	
UEGNSG711	Process meter reading information using appropriate	40
	technology	
UEGNSG712	Read and record meter readings	40
UEGNSG714	Relight Type A gas appliances	60
UEGNSG804	Maintain single stage and single run gas flow and	80
	pressure control and measuring devices	
UEPOPS203	Operate and monitor communications system	20
UEPOPS205	Conduct minor mechanical maintenance	30
UETTDREL14	Working safely near live electrical apparatus as a non-	40
	electrical worker	
Group C: Gener	al elective units	Weighting Points
UEECD0050	Use and maintain the integrity of a portable gas	20
	detection device	
	LUEECD0007 Apply work health and safety regulations,	
	codes and practices in the workplace	
UEGNSG101	Undertake gas leak surveys	60
UEGNSG135	Monitor and control gas odourisation	100
UEGNSG137	Operate and maintain gas station water bath heaters	60
UEGNSG138	Install and commission stationary gas fuelled turbine	60
	engines	
	□ CPCCWHS1001 Prepare to work safely in the	
	construction industry	
	LILTAIDOOLDanida andinadan	
LIECNICC120	□ HLTAID001 Provide cardiopulmonary resuscitation	CO.
UEGNSG139	Repair and maintain stationary gas fuelled turbine	60
UEGNSG142	engines Conduct isolations under the permit to work system for	80
UEGN3G142	Conduct isolations under the permit to work system for gas industry work sites	00
	∟MSMWHS217 Gas test atmospheres	
UEGNSG200	Conduct butt fusion of large diameter polyethylene gas	20
OLGIN3G200	pipeline systems	20
UEGNSG201	Conduct distribution pipeline emergency repair	100
OLGINGUZUI	Conduct distribution pipeline emergency repair	100
	∟UEGNSG225 Perform routine maintenance on	
	distribution pipeline facilities and equipment	
UEGNSG202	Conduct emergency site control on gas distribution	100
	assets	
	2000	L

UEGNSG212	Construct, lay and connect a gas distribution service to a plastic main	60
UEGNSG213	Construct, lay and connect a gas distribution service to a steel main	60
UEGNSG216	Commission or decommission gas distribution pipelines	100
UEGNSG217	Launch and recover PIGs in a gas distribution pipeline	100
UEGNSG218	Carry out surveillance on gas distribution assets	90
UEGNSG220	Construct and lay polyethylene gas distribution mains	60
UEGNSG222	Construct and lay nylon or PVC gas distribution mains	60
UEGNSG223	Construct and lay steel gas distribution pipelines	60
UEGNSG225	Perform routine maintenance on distribution pipeline facilities and equipment	100
UEGNSG228	Construct and lay large copper gas distribution pipelines LUEGNSG134 Establish a utilities infrastructure work	60
	site	
UEGNSG229	Prepare simple drawings of as laid gas mains and services	40
UEGNSG344	Commission or decommission gas transmission pipelines	120
UEGNSG346	Launch and recover PIGs in gas transmission pipelines	100
UEGNSG347	Perform routine maintenance on transmission pipeline facilities and equipment	110
UEGNSG348	Supervise the operation of plant and equipment for the construction of gas transmission pipelines	60
UEGNSG349	Carry out surveillance of gas transmission pipelines	110
UEGNSG350	First response to a gas facility event CPPFES2005A Demonstrate first attack firefighting equipment HLTAID003 Provide first aid	60
	□ UEGNSG141 Apply workplace health and safety regulations, codes and practices in the gas supply industry	
UEGNSG352	Check and report on gas station conditions	40
UEGNSG353	Carry out aerial surveillance of gas transmission pipelines	60
UEGNSG354	Control excavations in the vicinity of gas transmission pipelines LUEGNSG004 Locate, prove and protect utility assets	60
UEGNSG355	Monitor and report on cathodic protection systems	60
UEGNSG356	Monitor and operate flow control, pressure measuring and regulating devices for gas transmission LUEGNSG006 Use a portable gas detector to locate escape	100

UEGNSG411	Maintain cathodic protection systems	100
UEGNSG411	Install cathodic protection systems	110
UEGNSG506	Respond to gas infrastructure emergencies	80
UEGNSG507	Remotely monitor and operate gas transmission flow	90
UEGINSG307	and pressure measuring and regulating devices	90
LIECNICCC14	∟MSS402061 Use SCADA systems in operations	00
UEGNSG614	Load, unload, exchange and connect LPG cylinders	80
UEGNSG617	Monitor and control the transfer of bulk LPG	100
UEGNSG618	Process liquefied petroleum gas (LPG)	100
UEGNSG619	Perform scheduled maintenance on gas processing or	110
LUE CN 16 C C C C	storage facilities and equipment	
UEGNSG620	Organise the repair of faults in LPG processing or	80
	storage facilities and equipment	
UEGNSG621	Control bulk storage of LPG	110
UEGNSG622	Assess the operational capability of gas safety	40
	equipment on a delivery vehicle	
UEGNSG706	Test new residential and small commercial gas	60
	installations	
UEGNSG713	Investigate billing exceptions-conditions	60
UEGNSG805	Maintain multi-stage and multi-run gas flow and	80
	pressure measuring and regulating devices	
	∟UEGNSG006 Use a portable gas detector to locate	
	escape	
	∟UEGNSG804 Maintain single stage and single run gas	
	flow and pressure control and measuring devices	
UEGNSG807	Install gas flow, measuring and pressure regulating	80
	devices	
	∟UEGNSG006 Use a portable gas detector to locate	
	escape	
UEGNSG811	Monitor and operate complex flow control, measuring	110
	and regulating devices for gas distribution	
UEPMNT367	Install and commission stationary gas fuelled	60
	reciprocating engines	
	∟ CPCCWHS1001 Prepare to work safely in the	
	construction industry	
	∟ HLTAID001 Provide cardiopulmonary resuscitation	
UEPMNT368	Repair and maintain stationary gas fuelled reciprocating	60
	engines	
	∟ CPCCWHS1001 Prepare to work safely in the	
	construction industry	
	HI TAID001 Provide cardiopulmonary resuscitation	
UFPOPS317		30
UEPOPS336	Manage, operate and monitor a gas turbine unit	60
UEPOPS347	Operate and monitor supervisory, control and data	40
	I Cinerate and monitor supervisory control and data	1 4()
UEPOPS317	engines L CPCCWHS1001 Prepare to work safely in the construction industry L HLTAID001 Provide cardiopulmonary resuscitation Operate and monitor fixed fire protection systems	30

Group D: Gener	al elective units	Weighting Points
UEGNSG106	Coordinate repair of pipeline, facilities and equipment	110
UEGNSG108	Operate and monitor pipeline control systems	60
UEGNSG109	Control field pipeline operations	60
UEGNSG110	Supervise technical operations for gas distribution or transmission	60
UEGNSG131	Compile a gas industry technical report	20
UEGNSG204	Coordinate and conduct gas distribution pipeline repair and modifications	110
UEGNSG207	Coordinate construction, laying and testing of gas distribution pipelines	110
UEGNSG210	Supervise and monitor contract staff for work on distribution pipelines	120
UEGNSG302	Conduct transmission pipeline emergency repair	120
UEGNSG305	Coordinate gas transmission pipeline repairs and modifications	110
UEGNSG310	Supervise and monitor contract work	60
UEGNSG314	Liaise with third party and the community to maintain pipeline integrity and community safety	40
UEGNSG325	Coordinate the operation of relevant plant and equipment for transmission pipeline construction	80
UEGNSG326	Coordinate and monitor staff and contractors	60
UEGNSG327	Coordinate transmission pipeline construction operations	60
UEGNSG501	Communicate with gas industry stakeholders to meet operational requirements	110
UEGNSG503	Monitor and control field activities	110
UEGNSG504	Monitor and control gas infrastructure using Control Centre systems	110
UEGNSG505	Operate and monitor gas infrastructure to meet nominated demand LMSS402061 Use SCADA systems in operations	120
UEGNSG806	Maintain SCADA controlled flow and pressure equipment and electronic gas measurement equipment LUEGNSG006 Use a portable gas detector to locate escape	100

UEE40511 - Certificate IV in Electrical - Air-conditioning Split Systems (Release 4)

Packaging Rules

Completion requirements

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

- All the Core competency standard units, defined in the Core Competency Standard Units table below and
- A combination of Elective competency standard units to achieve a total weighting of 160 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG105A - Those holding an Unrestricted Electricians Licence or equivalent issued in an Australian State or Territory meets the requirements of this unit and its pre-requisite requirements.

Core Competency Standard Units		Weighting Points
All Core competency	standard units to be achieved	
UEENEEE038B	Participate in development and follow a personal	20
	competency development plan	
UEENEEE101A	Apply Occupational Health and Safety regulations,	20
	codes and practices in the workplace	
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40
	components	
UEENEEE104A	Solve problems in d.c. circuits	80
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes	40
	and specifications	
UEENEEE117A	Implement and monitor energy sector OHS policies and	20
	procedures	
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE137A	Document and apply measures to control OHS risks	20
	associated with electrotechnology work	
UEENEEG006A	Solve problems in single and three phase low voltage	80
	machines	
UEENEEG033A	Solve problems in single and three phase low voltage	60
	electrical apparatus and circuits	
UEENEEG063A	Arrange circuits, control and protection for general	40
	electrical installations	
UEENEEG101A	Solve problems in electromagnetic devices and related	60
	circuits	
UEENEEG102A	Solve problems in low voltage a.c. circuits	80

UEENEEG103A	Install low voltage wiring and accessories	20
UEENEEG104A	Install appliances, switchgear and associated accessories	20
	for low voltage electrical installations	
UEENEEG105A	Verify compliance and functionality of low voltage	40
	general electrical installations	
UEENEEG106A	Terminate cables, cords and accessories for low voltage	40
	circuits	
UEENEEG107A	Select wiring systems and cables for low voltage general	60
	electrical installations	
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical	40
	apparatus and circuits	
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	30
UEENEEJ105A	Position, assemble and start up single head split air	70
	conditioning and water heating heat pump systems	
UEENEEJ172A	Recover, pressure test, evacuate, charge and leak test	60
	refrigerants - split systems	
UEENEEK145A	Implement and monitor energy sector environmental	20
	and sustainable policies and procedures	
Total points in core		1120

Elective Competency Standard Units

Complete Elective units to achieve a total of weighting of 160 points from the following groups:

Group			Minimum	Maximum
			points	points
Α	Imported and Con	nmon Elective Units	0	80
	accredited courses must be selected f packaged at AQF I weighting by the re	m other training packages and/or state scan be added to this group, but they from qualifications where the unit is first level 4. If units have not being assigned a elevant EE-Oz Industry Technical Advisory veighting will be 10 points.		
В	Qualification Electi	ve Units	0	80
C	Qualification Electi	ve Units	80	160
	You may select all	your elective units from this Group		
		Common Elective Units ts to a maximum weighting of 80		Weighting Points
	ENEEC001B	Maintain documentation		20
UEENEEC002B Source and purchase material/parts for installation or service jobs		20		
UE	UEENEEC003B Provide quotations for installation or service jobs		ice jobs	20
UE	ENEEC010B	Deliver a service to customers		20
UEENEED101A Use computer applications relevant to a wor		vorkplace	20	

UEENEEE009B	Comply with scheduled and preventative maintenance	20
	program processes	
UEENEEE020B	Provide basic instruction in the use of	20
CDCCOLIC1001A	electrotechnology apparatus	10
CPCCOHS1001A	Work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
	Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 4. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	Up to 80 points
	Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework	
Group B Qualification E	Elective Units	Weighting
		Points
	ts to a maximum weighting of 80	
UEENEED104A	Use engineering applications software on personal computers	40
UEENEEI116A	Assemble, enter and verify operating instructions in microprocessor equipped devices	20
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60
UEENEEJ103A	Establish the basic operating conditions of vapour compression systems	60
UEENEEJ104A	Establish the basic operating conditions of air conditioning systems	20
UEENEEJ174A	Apply safety awareness and legal requirements for hydrocarbon refrigerants	10
Group C Qualification E		Weighting Points
You must complete uni	its to a minimum weighting of 80	
You may select all your	elective units from this Group	
UEENEEE114A	Supervise and coordinate energy sector work activities	40
UEENEEG122A	Conduct compliance inspection of single phase LV electrical installations	60
UEENEEG123A	Conduct compliance inspection of LV electrical installations with demand exceeding 100 A per phase	40
UEENEEJ192A	Analyse the psychrometric performance of HVAC/R systems	50
UEENEEJ193A	Analyse the thermodynamic performance of HVAC/R systems	40

UEE40711 - Certificate IV in Electronics and Communications (Release 4)

Packaging Rules

Completion requirements

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

- All the Core competency standard units, defined in the Core Competency Standard Units table below and
- A combination of Elective competency standard units to achieve a total weighting of 560 points in accordance with the Elective Competency Standard Units table below.

Core Competency St		Weighting Points
All Core competency	standard units to be achieved	
UEENEEE038B	Participate in development and follow a personal	20
	competency development plan	
UEENEEE101A	Apply Occupational Health and Safety regulations, codes	20
	and practices in the workplace	
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40
	components	
UEENEEE104A	Solve problems in d.c. circuits	80
UEENEEE117A	Implement and monitor energy sector OHS policies and	20
	procedures	
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE137A	Document and apply measures to control OHS risks	20
	associated with electrotechnology work	
UEENEEH102A	Repairs basic electronic apparatus faults by replacement	40
	of components	
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40
UEENEEH112A	Troubleshoot digital sub-systems	80
UEENEEH113A	Troubleshoot amplifiers in an electronic apparatus	80
UEENEEH114A	Troubleshoot resonance circuits in an electronic	80
	apparatus	
UEENEEH138A	Fault find and repair complex power supplies	40
UEENEEH139A	Troubleshoot basic amplifier circuits	40
UEENEEH146A	Solve fundamental electronic communications system	40
	problems	
UEENEEK145A	Implement and monitor energy sector environmental and	20
	sustainable policies and procedures	
Total points in core		720

Elective Competency Standard Units

Complete Elective units to achieve a total of weighting of 560 points from the following groups:

Gro	pup		Minimum points	Maximum points
Α	Imported and Co	ommon Elective Units	0	220
	Imported units fr accredited cours must be selected packaged at AQI weighting by the	rom other training packages and/or state es can be added to this group, but they If from qualifications where the unit is first Flevel 4. If units have not being assigned a e relevant EE-Oz Industry Technical Advisory		
_		weighting will be 10 points.		2.50
В	Qualification Elec		0	360
С	Qualification Elec	ctive Units	200	560
	You may select a	all your elective units from this Group		
Gro		nd Common Elective Units		Weighting
				Points
		nits to a maximum weighting of 220		
	ENEEC001B	Maintain documentation		20
UE	ENEEC002B	Source and purchase material/parts for in service jobs	stallation or	20
UE	ENEEC003B	Provide quotations for installation or serv	ce jobs	20
UE	ENEEC010B	Deliver a service to customers		20
UEE	ENEED101A	Use computer applications relevant to a v	vorkplace	20
UEE	ENEEE009B	Comply with scheduled and preventative	maintenance	20
		program processes		
UE	ENEEE020B	Provide basic instruction in the use of elec	ctrotechnology	20
ICT	TEN3056A	apparatus Install telecommunications network equip	ment	40
	S402001A	Apply competitive systems and practices	ITICIT	20
	S402020A	Apply quick changeover procedures		20
	S402021A	Apply Just in Time procedures		20
	S402040A	Apply 5S procedures		20
	S402080A	Undertake root cause analysis		20
	MSS402081A Contribute to the application of a proactive maintenance strategy		/e	20
		Imported units from other training packages state accredited courses can be added to but they must be selected from qualification unit is first packaged at AQF level 4. If unit being assigned a weighting by the relevant Industry Technical Advisory Committee, the will be 10 points. Note: For further information see Application NQC Flexibility Formula, UEE11 Electrotections.	this group, ons where the ts have not nt EE-Oz neir weighting tion of the	Up to 220 points
		Training Package, Version 1, Volume 1 Qu Framework	٠,	

Group B Qualification	on Elective Units	Weighting Points
You may complete	units to a maximum weighting of 360	
UEENEEA101A	Assemble electronic components	40
UEENEEA102A	Select electronic components for assembly	20
UEENEEA103A	Set up and check electronic component assembly machines	40
UEENEEA104A	Modify electronic sub assemblies	40
UEENEEA105A	Conduct quality and functional tests on assembled electronic apparatus	20
UEENEEA106A	Use lead-free soldering techniques	40
UEENEEB101A	Operate and maintain amateur radio communication stations	40
UEENEED102A	Assemble, set-up and test computing devices	80
UEENEED104A	Use engineering applications software on personal computers	40
UEENEED112A	Support computer hardware and software for engineering applications	120
UEENEED129A	Develop web pages for engineering applications	40
UEENEED130A	Select, install, configure and test multimedia components	40
UEENEED143A	Install and configure a client computer operating system and software	40
UEENEED146A	Set up and configure basic local area network (LAN)	80
UEENEED153A	Set up, configure and test biometric devices	40
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40
UEENEEE108A	Lay wiring/cabling and terminate accessories for extra- low voltage (ELV) circuits	40
UEENEEE121A	Plan an integrated cabling installation system	40
UEENEEE122A	Carry out preparatory energy sector work activities	60
UEENEEE123A	Solve basic problems electronic and digital equipment and circuits	80
UEENEEE179A	Identify and select components, accessories and materials for energy sector work activities	20
UEENEEF102A	Install and maintain cabling for multiple access to telecommunication services	120
UEENEEF104A	Install and modify performance data communication copper cabling	40
UEENEEF105A	Install and modify optical fibre performance data communication cabling	40
UEENEEF106A	Solve problems in voice and data communications circuits	40
UEENEEF107A	Set up and configure the wireless capabilities of communications and data storage devices	40
· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·

UEENEEF108A	Select and arrange equipment for wireless	40
	communication networks	
UEENEEF109A	Install and connect data and voice communication	40
	equipment	
UEENEEF110A	Select and arrange data and voice equipment for local	40
	area networks	
UEENEEF111A	Test, report and rectify faults in data and voice	40
	installations	
UEENEEF114A	Set up and configure basic data communication systems	40
UEENEEH101A	Repair basic computer equipment faults by replacement	40
	of modules/sub-assemblies	
UEENEEH103A	Repair routine business equipment faults	120
UEENEEH104A	Set up and test residential video/audio equipment	40
UEENEEH105A	Verify functionality and compliance of custom electronic	40
	installations	
UEENEEH106A	Assemble and set up fixed video/audio components and	120
	systems in buildings and premises	
UEENEEH107A	Repair predictable faults in general electronic apparatus	40
UEENEEH108A	Assemble and install reception antennae and signal	60
	distribution equipment	
UEENEEH109A	Set up and test gaming and game equipment	60
UEENEEH110A	Install commercial video/audio system components	120
UEENEEH115A	Develop software solutions for microcontroller based	60
	systems	
UEENEEH116A	Find and repair microwave amplifier section faults in	40
	electronic apparatus	
UEENEEH117A	Carry out repairs of predictable faults in video and audio	120
	replay/recording apparatus	
UEENEEH118A	Fault find and repair electronic apparatus	40
UEENEEH119A	Repair predictable faults in television receivers	120
UEENEEH120A	Fault find and repair gaming and games equipment	80
UEENEEH121A	Fault find and repair high volume office equipment	120
UEENEEH122A	Fault find and repair remote control apparatus	60
UEENEEH123A	Fault find and repair microwave heating apparatus	40
UEENEEH124A	Repair predictable faults in audio components	40
UEENEEH127A	Set up and adjust commercial radio frequency (RF)	60
	transmission and reception systems	
UEENEEH128A	Install and test microwave antennae and waveguides	60
UEENEEH142A	Solve oscillator problems	40
UEENEEH150A	Assemble and set up basic security systems	80
UEENEEH151A	Install large security systems	100
UEENEEH152A	Enter instructions and test wired and wireless security	40
	systems	
UEENEEH154A	Program and commission commercial security systems	60
UEENEEH155A	Program and commission commercial access control	60
	security systems	

UEENEEH156A	Program and commission commercial security closed	60
	circuit television systems	10
UEENEEH161A	Install fire detection and warning system apparatus	40
UEENEEH162A	Verify compliance and functionality of fire protection system installations	60
UEENEEH163A	Enter and verify programs for fire protection systems	40
UEENEEH164A	Commission large fire protection systems	40
UEENEEH165A	Troubleshoot fire protection systems	40
UEENEEH166A	Troubleshoot microcontroller based hardware systems	40
UEENEEH169A	Solve problems in basic electronic circuits	100
UEENEEH171A	Troubleshoot faults in television receivers	120
UEENEEH172A	Troubleshoot communication systems	80
UEENEEH173A	Troubleshoot professional audio reproduction components	120
UEENEEI116A	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices	60
UEENEEI150A	Develop, enter and verify discrete control programs for	60
UEENEEP024A	programmable controllers Attach cords and plugs to electrical equipment for	20
UEEINEEPUZ4A	Attach cords and plugs to electrical equipment for	20
	connection to a single phase 220 Volt supply	
	connection to a single phase 230 Volt supply Attach cords, cables and plugs to electrical equipment	20
UEENEEP025A Group C Qualification	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply	20 Weighting
UEENEEP025A Group C Qualification You must complete	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200	
UEENEEP025A Group C Qualification You must complete You may select all y	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group	Weighting Points
UEENEEP025A Group C Qualification You must complete	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group Prepare specifications for the supply of materials and	Weighting
UEENEEP025A Group C Qualification You must complete You may select all you may select all you mean to select all you were mean to select all you mean to select	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group Prepare specifications for the supply of materials and equipment for electrotechnology projects	Weighting Points
UEENEEP025A Group C Qualification You must complete You may select all y UEENEEC004B UEENEEC005B	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group Prepare specifications for the supply of materials and equipment for electrotechnology projects Estimate electrotechnology projects	Weighting Points 40 40
UEENEEP025A Group C Qualification You must complete You may select all you may select all you mean to select all you were mean to select all you mean to select	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group Prepare specifications for the supply of materials and equipment for electrotechnology projects Estimate electrotechnology projects Evaluate and modify object oriented code programs Analyse and implement biometric measuring techniques	Weighting Points
UEENEEP025A Group C Qualification You must complete You may select all you may select all you mee with the select all you may select all you mee with the select all you may select all you may select all you may select all you meet all you were all you meet all	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group Prepare specifications for the supply of materials and equipment for electrotechnology projects Estimate electrotechnology projects Evaluate and modify object oriented code programs Analyse and implement biometric measuring techniques and applications Develop and implement energy sector maintenance	Weighting Points 40 40 40
UEENEEP025A Group C Qualification You must complete You may select all you may select all you meeneec004B UEENEEC004B UEENEEC005B UEENEED103A UEENEED154A	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group Prepare specifications for the supply of materials and equipment for electrotechnology projects Estimate electrotechnology projects Evaluate and modify object oriented code programs Analyse and implement biometric measuring techniques and applications	Weighting Points 40 40 40 120
UEENEEP025A Group C Qualification You must complete You may select all you may select all you meeneec004B UEENEEC004B UEENEEC103A UEENEED154A UEENEEE110A	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group Prepare specifications for the supply of materials and equipment for electrotechnology projects Estimate electrotechnology projects Evaluate and modify object oriented code programs Analyse and implement biometric measuring techniques and applications Develop and implement energy sector maintenance programs Supervise and coordinate energy sector work activities	Weighting Points 40 40 40 40 120
UEENEEP025A Group C Qualification You must complete You may select all y UEENEEC004B UEENEEC005B UEENEED103A UEENEED154A UEENEEE110A UEENEEE114A	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group Prepare specifications for the supply of materials and equipment for electrotechnology projects Estimate electrotechnology projects Evaluate and modify object oriented code programs Analyse and implement biometric measuring techniques and applications Develop and implement energy sector maintenance programs	Weighting Points 40 40 40 120 60 40
UEENEEP025A Group C Qualification You must complete You may select all y UEENEEC004B UEENEEC005B UEENEED103A UEENEED154A UEENEEE110A UEENEEE114A UEENEEE114A UEENEEH129A	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group Prepare specifications for the supply of materials and equipment for electrotechnology projects Estimate electrotechnology projects Evaluate and modify object oriented code programs Analyse and implement biometric measuring techniques and applications Develop and implement energy sector maintenance programs Supervise and coordinate energy sector work activities Fault find and repair navigation systems	Weighting Points 40 40 40 120 60 40 60
UEENEEP025A Group C Qualification You must complete You may select all y UEENEEC004B UEENEEC005B UEENEED103A UEENEED154A UEENEEE110A UEENEEE114A UEENEEE114A UEENEEH129A	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group Prepare specifications for the supply of materials and equipment for electrotechnology projects Estimate electrotechnology projects Evaluate and modify object oriented code programs Analyse and implement biometric measuring techniques and applications Develop and implement energy sector maintenance programs Supervise and coordinate energy sector work activities Fault find and repair navigation systems Fault find and repair satellite-based surveillance and	Weighting Points 40 40 40 120 60 40 60
UEENEEP025A Group C Qualification You must complete You may select all y UEENEEC004B UEENEEC005B UEENEED103A UEENEED154A UEENEEE110A UEENEEE114A UEENEEE114A UEENEEH129A UEENEEH130A	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group Prepare specifications for the supply of materials and equipment for electrotechnology projects Estimate electrotechnology projects Evaluate and modify object oriented code programs Analyse and implement biometric measuring techniques and applications Develop and implement energy sector maintenance programs Supervise and coordinate energy sector work activities Fault find and repair navigation systems Fault find and repair satellite-based surveillance and observation systems	Weighting Points 40 40 40 40 120 60 40 60 60
UEENEEP025A Group C Qualification You must complete You may select all y UEENEEC004B UEENEEC005B UEENEED103A UEENEED154A UEENEEE110A UEENEEE114A UEENEEH129A UEENEEH130A UEENEEH131A	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group Prepare specifications for the supply of materials and equipment for electrotechnology projects Estimate electrotechnology projects Evaluate and modify object oriented code programs Analyse and implement biometric measuring techniques and applications Develop and implement energy sector maintenance programs Supervise and coordinate energy sector work activities Fault find and repair navigation systems Fault find and repair satellite-based surveillance and observation systems Fault find and repair radar apparatus and systems Fault find and repair global positioning systems Fault find and repair telecommunication apparatus and	Weighting Points 40 40 40 40 120 60 60 60 120
UEENEEP025A Group C Qualification You must complete You may select all y UEENEEC004B UEENEEC005B UEENEED103A UEENEED154A UEENEEE110A UEENEEE114A UEENEEE114A UEENEEH129A UEENEEH130A UEENEEH131A UEENEEH131A UEENEEH132A	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group Prepare specifications for the supply of materials and equipment for electrotechnology projects Estimate electrotechnology projects Evaluate and modify object oriented code programs Analyse and implement biometric measuring techniques and applications Develop and implement energy sector maintenance programs Supervise and coordinate energy sector work activities Fault find and repair navigation systems Fault find and repair satellite-based surveillance and observation systems Fault find and repair radar apparatus and systems Fault find and repair global positioning systems Fault find and repair telecommunication apparatus and systems	Weighting Points 40 40 40 40 120 60 40 60 120 60
UEENEEP025A Group C Qualification You must complete You may select all y UEENEEC004B UEENEEC005B UEENEED103A UEENEED154A UEENEEE110A UEENEEE114A UEENEEH129A UEENEEH130A UEENEEH131A UEENEEH131A UEENEEH132A UEENEEH133A	Attach cords, cables and plugs to electrical equipment for connection to 1000 Va.c. or 1500 Vd.c. supply on Elective Units units to a minimum weighting of 200 our elective units from this Group Prepare specifications for the supply of materials and equipment for electrotechnology projects Estimate electrotechnology projects Evaluate and modify object oriented code programs Analyse and implement biometric measuring techniques and applications Develop and implement energy sector maintenance programs Supervise and coordinate energy sector work activities Fault find and repair navigation systems Fault find and repair satellite-based surveillance and observation systems Fault find and repair radar apparatus and systems Fault find and repair global positioning systems Fault find and repair telecommunication apparatus and	Weighting Points 40 40 40 40 120 60 40 60 60 120 60 60

UEENEEH137A	Program and commission commercial video/audio systems	40
UEENEEH140A	Fault find and repair sonar apparatus and systems	120
UEENEEH153A	Program and test large security systems	120
UEENEEH157A	Develop basic plans for integrating security systems	40
UEENEEH175A	Troubleshooting in security system installations	60
UEENEEH176A	Diagnose and rectify faults in electronic display circuits	60
UEENEEH177A	Diagnose and rectify faults in recording and replay equipment	60
UEENEEH178A	Diagnose and rectify faults in camera circuits and equipment	60
UEENEEH179A	Diagnose and rectify faults in digital television circuits and apparatus	80
UEENEEH180A	Diagnose and rectify faults in digital transmission circuits and systems	80
UEENEEH186A	Commission satellite and microwave communication systems	40
UEENEEI120A	Provide solutions to problems in industrial control systems	60
UEENEEI124A	Fault find and repair analogue circuits and components in electronic control systems	60
UEENEEI139A	Diagnose and rectify faults in digital controls systems	60
UEENEEI155A	Develop structured programs to control external devices	40

UEE41511 - Certificate IV in Video and Audio Systems (Release 4)

Packaging Rules

Completion requirements

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

- All the Core competency standard units, defined in the Core Competency Standard Units table below and
- A combination of Elective competency standard units to achieve a total weighting of 440 points in accordance with the Elective Competency Standard Units table below.

Core Competency Standard Units		Weighting Points
· ·	y standard units to be achieved	
UEENEEE038B	Participate in development and follow a personal competency development plan	20
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40
UEENEEE104A	Solve problems in d.c. circuits	80
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40
UEENEEH112A	Troubleshoot digital sub-systems	80
UEENEEH113A	Troubleshoot amplifiers in an electronic apparatus	80
UEENEEH114A	Troubleshoot resonance circuits in an electronic apparatus	80
UEENEEH119A	Repair predictable faults in television receivers	120
UEENEEH138A	Fault find and repair complex power supplies	40
UEENEEH139A	Troubleshoot basic amplifier circuits	40
UEENEEH146A	Solve fundamental electronic communications system problems	40
UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and procedures	20
Total points in core		840
Elective Competenc	y Standard Units	

Cor	nplete Elective unit	ts to achieve a total of weighting of 440 poir	ts from the foll	owing groups:
Gro	Group Minimum points		Maximum points	
A	Imported units from accredited course must be selected packaged at AQF weighting by the	mmon Elective Units om other training packages and/or state es can be added to this group, but they from qualifications where the unit is first level 4. If units have not being assigned a relevant EE-Oz Industry Technical Advisory weighting will be 10 points.	0	220
В	Qualification Elec		0	220
С	Qualification Elec	tive Units I your elective units from this Group	220	440
	oup A Imported and	d Common Elective Units its to a maximum weighting of 220	L	Weighting Points
	ENEEC001B	Maintain documentation		20
	NEEC002B	Source and purchase material/parts for ins service jobs	tallation or	20
UEE	ENEEC003B	Provide quotations for installation or service	e iobs	20
	ENEEC010B	Deliver a service to customers		20
	ENEED101A	Use computer applications relevant to a we	orkplace	20
	ENEEE009B	Comply with scheduled and preventative r program processes		20
UEE	ENEEE020B	Provide basic instruction in the use of elect apparatus	rotechnology	20
		Imported units from other training package state accredited courses can be added to the but they must be selected from qualification unit is first packaged at AQF level 4. If uniting being assigned a weighting by the relevant Industry Technical Advisory Committee, the will be 10 points.	his group, ons where the s have not t EE-Oz	Up to 220 points
		Note: For further information see Applicati NQC Flexibility Formula, UEE11 Electrotech Training Package, Version 1, Volume 1 Qua Framework	nology	
Group B Qualification Elective Units				Weighting Points
1 Y 🔿 I	You may complete units to a maximum weighting of 220			
		Assemble electronic components		40
UEE	ENEEA101A ENEEA106A	Assemble electronic components Use lead-free soldering techniques		40

UEENEED104A	Use engineering applications software on personal	40
	computers	100
UEENEED112A	Support computer hardware and software for	120
LIFENIFE D120 A	engineering applications	40
UEENEED129A	Develop web pages for engineering applications	40
UEENEED130A	Select, install, configure and test multimedia	40
	components	40
UEENEED143A	Install and configure a client computer operating system and software	40
UEENEED146A	Set up and configure basic local area network (LAN)	80
UEENEED153A		40
	Set up, configure and test biometric devices	
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40
UEENEEE108A	Lay wiring/cabling and terminate accessories for extra-	40
	low voltage (ELV) circuits	
UEENEEE121A	Plan an integrated cabling installation system	40
UEENEEE123A	Solve basic problems electronic and digital equipment	80
	and circuits	
UEENEEE179A	Identify and select components, accessories and	20
	materials for energy sector work activities	
UEENEEF102A	Install and maintain cabling for multiple access to	120
	telecommunication services	
UEENEEF104A	Install and modify performance data communication	40
	copper cabling	
UEENEEF105A	Install and modify optical fibre performance data	40
	communication cabling	
UEENEEF106A	Solve problems in voice and data communications	40
	Circuits	40
UEENEEF107A	Set up and configure the wireless capabilities of	40
	communications and data storage devices	40
UEENEEF108A	Select and arrange equipment for wireless communication networks	40
UEENEEF109A	Install and connect data and voice communication	40
UEEINEEFIU9A		40
UEENEEF110A	equipment Select and arrange data and voice equipment for local	40
UEEINEEFIIUA	area networks	40
UEENEEF111A	Test, report and rectify faults in data and voice	40
OLLINELI IIII	installations	
UEENEEF114A	Set up and configure basic data communication systems	40
UEENEEH101A	Repair basic computer equipment faults by replacement	40
	of modules/sub-assemblies	
UEENEEH103A	Repair routine business equipment faults	120
UEENEEH104A	Set up and test residential video/audio equipment	40
UEENEEH105A	Verify functionality and compliance of custom electronic	40
	installations	

Group C Qualification	on Elective Units e units to a minimum weighting of 220	Weighting Points
JLLINLLIIIUA	microprocessor equipped devices	
Jeeneeh187A Jeeneel116A	Solve problems in electronic musical equipment circuits Assemble, enter and verify operating instructions in	40 20
JEENEEH174A	Troubleshoot audio - video recording equipment	120
JEENEEH173A	Troubleshoot professional audio reproduction components	120
JEENEEH172A	Troubleshoot communication systems Troubleshoot professional audio reproduction	
JEENEEH171A	Troubleshoot communication systems	80
	<u>'</u>	120
JEENEEH 166A JEENEEH 169A	Troubleshoot microcontroller based hardware systems Solve problems in basic electronic circuits	100
JEENEEH166A	circuit television systems	40
JEENEEH156A	security systems Program and commission commercial security closed	60
UEENEEH155A	Program and commission commercial access control	60
JEENEEH154A	Program and commission commercial security systems	60
	systems	
JEENEEH152A	Enter instructions and test wired and wireless security	40
JEENEEH151A	Install large security systems	100
JEENEEH150A	Assemble and set up basic security systems	80
JEENEEH142A	Solve oscillator problems	40
JEENEEH128A	Install and test microwave antennae and waveguides	60
JEENEEH127A	Set up and adjust commercial radio frequency (RF)	60
JEENEEH124A	Repair predictable faults in audio components	40
JEENEEH123A	Fault find and repair microwave heating apparatus	40
JEENEEH122A	Fault find and repair remote control apparatus	60
JEENEEH121A	Fault find and repair high volume office equipment	120
JEENEEH120A	Fault find and repair gaming and games equipment	80
JEENEEH118A	Fault find and repair electronic apparatus	40
IEENIEEL 1440 A	replay/recording apparatus	40
JEENEEH117A	Carry out repairs of predictable faults in video and audio	120
UEENEEH116A	Find and repair microwave amplifier section faults in electronic apparatus	40
15515514464	systems	10
JEENEEH115A	Develop software solutions for microcontroller based	60
JEENEEH110A	Install commercial video/audio system components	120
JEENEEH109A	Set up and test gaming and game equipment	60
	distribution equipment	
ueeneeh108A	Assemble and install reception antennae and signal	60
JEENEEH107A	Repair predictable faults in general electronic apparatus	40
	systems in buildings and premises	

You may select all you	r elective units from this Group	
UEENEEC004B	Prepare specifications for the supply of materials and	40
	equipment for electrotechnology projects	
UEENEEC005B	Estimate electrotechnology projects	40
UEENEED103A	Evaluate and modify object oriented code programs	40
UEENEED154A	Analyse and implement biometric measuring techniques	120
	and applications	
UEENEEE114A	Supervise and coordinate energy sector work activities	40
UEENEEH133A	Fault find and repair telecommunication apparatus and	60
	systems	
UEENEEH134A	Fault find and repair electronic medical equipment	120
UEENEEH135A	Design custom electronic equipment installations	120
UEENEEH136A	Design commercial video/audio installations	120
UEENEEH137A	Program and commission commercial video/audio	40
	systems	
UEENEEH153A	Program and test large security systems	120
UEENEEH157A	Develop basic plans for integrating security systems	40
UEENEEH175A	Troubleshooting in security system installations	60
UEENEEH176A	Diagnose and rectify faults in electronic display circuits	60
UEENEEH177A	Diagnose and rectify faults in recording and replay	60
	equipment	
UEENEEH178A	Diagnose and rectify faults in camera circuits and	60
	equipment	
UEENEEH179A	Diagnose and rectify faults in digital television circuits	80
	and apparatus	
UEENEEH180A	Diagnose and rectify faults in digital transmission circuits	80
	and systems	
UEENEEI155A	Develop structured programs to control external	40
	devices	

UEE41920 - Certificate IV in Electrical - Renewable Energy (Release 1)

Packaging Rules

A total of 440 weighting points comprising:

280 core weighting points listed below; plus

160 general elective weighting points from the general elective units listed below.

Choose a total of 160 weighting points elective units from the list below, of which between 0 and 50 weighting points can be taken from Group A; between 0 and 120 weighting points can be taken from Group B; and between 40 and 160 weighting points can be taken from Group C (or all 160 elective weighting points can be taken from Group C).

Up to 50 weighting points of the general elective units Group A, may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided that selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points, unless directed from the Electrotechnology Industry Reference Committee (IRC).

There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

Core units		Weighting Points
UEECD0010	Compile and produce an energy sector detailed report	60
UEECD0024	Implement and monitor energy sector WHS policies and procedures	20
UEECD0027	Participate in development and follow a personal competency development plan	20
UEERE0015	Implement and monitor energy sector environmental and sustainable policies and procedures	20
UEERE0022	Solve basic problems in photovoltaic energy apparatus and systems*	20
UEERE0025	Carry out basic repairs to renewable energy (RE) apparatus*	80
UEERE0034	Diagnose and rectify faults in renewable energy (RE) control systems*	60
Group A: Imported	and common elective units	Weighting Points
BSBCUS201	Deliver a service to customers	20
CPCCWHS1001	Prepare to work safely in the construction industry	10

HLTAID001	Provide cardiopulmonary resuscitation	10
ICTICT203	Operate application software packages	20
UEECD0011	Comply with scheduled and preventative maintenance	20
	program processes	
UEECD0035	Provide basic instruction in the use of	20
	electrotechnology apparatus	
UEECO0002	Maintain documentation	20
UEECO0015	Provide quotations for installation or service jobs	20
UEECO0017	Source and purchase material/parts for installation or	20
	service jobs	
Group B: Qualific	cation elective units.	Weighting Points
UEECS0033	Use engineering applications software on personal	40
	computers	
UEEEL0013	Install, set up and commission interval metering*	20
UEEIC0002	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices*	
UEEIC0013	Develop, enter and verify discrete control programs	60
	for programmable controllers*	
UEERE0016	Install, configure and commission LV grid-connected	40
	photovoltaic power systems*	
UEERE0019	Maintain safety and tidiness of remote area power	20
	supply systems*	
UEERE0023	Work safely with remote area power supply systems*	20
UEERE0035	Install ELV stand-alone photovoltaic power systems*	60
UEERE0036	Install small wind energy conversion systems rated up	20
	to 10 kW for ELV stand-alone applications*	
UEERE0037	Install, configure and commission LV micro-hydro	20
	systems rated up to 6.4 kW*	
UEERE0038	Install, configure and commission LV wind energy	40
	conversion systems rated up to 10 kW*	
UEERE0039	Install, set up and maintain ELV micro-hydro systems	20
	rated up to 6.4 kW*	
UEERE0045	Solve basic problems in micro-hydro systems*	20
UEERE0046	Solve problems in stand-alone renewable energy (RE)	60
	systems*	
UEERE0047	Solve problems in wind energy conversion systems	60
	(WECS) rated up to 10 kW*	
UEERE4001	Install, maintain and fault find battery storage systems	60
	for grid-connected photovoltaic systems*	
UEERE5001	Design battery storage systems for grid-connected	80
	photovoltaic systems*	
•	cation elective units	Weighting Points
UEEEL0050	Install and replace low voltage current transformer	20
	metering*	
UEERE0003	Assess energy loads and uses for energy efficiency in	40
	commercial facilities*	

UEERE0004	Assess energy loads and uses for energy efficiency in	40
	industrial properties and enterprises*	
UEERE0005	Assess energy loads and uses for energy efficiency in	40
	residential, office and retail premises*	
UEERE0011	Design grid-connected photovoltaic power supply	60
	systems*	
UEERE0014	Develop strategies to address sustainability issues for	20
	electrical installations*	
UEERE0027	Coordinate maintenance of renewable energy (RE)	20
	apparatus and systems*	

UEE40620 - Certificate IV in Electrotechnology - Systems Electrician (Release 1)

Packaging Rules

A total of 440 weighting points comprising:

120 core weighting points listed below; plus

320 general elective weighting points from the general elective units listed below.

Choose a total of 320 weighting points elective units from the list below, of which between 0 and 100 weighting points can be taken from Group A; between 0 and 100 weighting points can be taken from Group B; and between 220 and 320 weighting points can be taken from Group C (or all 320 elective weighting points can be taken from Group C).

Up to 100 weighting points of the general elective units Group A , may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points, unless directed from the Electrotechnology Industry Reference Committee (IRC).

There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

Core units		Weighting Points
UEECD0010	Compile and produce an energy sector detailed report	60
UEECD0024	Implement and monitor energy sector WHS policies and procedures	20
UEECD0027	Participate in development and follow a personal competency development plan	20
UEERE0015	Implement and monitor energy sector environmental and sustainable policies and procedures	20
Group A: Imported and common elective units		Weighting Points
BSBCUS201	Deliver a service to customers	20
CPCCWHS1001	Prepare to work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
ICTICT203	Operate application software packages	20
UEECD0011	Comply with scheduled and preventative maintenance program processes	20

UEECD0035	Provide basic instruction in the use of	20
	electrotechnology apparatus	
UEECO0002	Maintain documentation	20
UEECO0015	Provide quotations for installation or service jobs	20
UEECO0017	Source and purchase material/parts for installation or	20
	service jobs	
Group B: General	elective units	Weighting Points
UEEAS0007	Assemble, mount and connect control gear and	40
	switchgear*	
UEEAS0008	Fabricate and assemble bus bars*	40
UEEAS0009	Mount and wire control panel equipment*	40
UEECD0028	Plan an integrated cabling installation system*	40
UEECD0050	Use and maintain the integrity of a portable gas	20
	detection device*	
UEECS0033	Use engineering applications software on personal	40
	computers	
UEEDV0005	Install and maintain cabling for multiple access to	80
	telecommunication services*	
UEEDV0008	Install, modify and verify coaxial and structured	40
	communication copper cabling*	
UEEEC0003	Assemble and set up basic security systems*	80
UEEEC0060	Repairs basic electronic apparatus faults by	40
	replacement of components*	
UEEEC0075	Troubleshoot single phase input d.c power supplies*	40
UEEEL0004	Carry out basic repairs to electrical components and	40
	equipment*	
UEEEL0013	Install, set up and commission interval metering*	20
UEEEL0016	Provide advice on effective and energy efficient	20
	lighting products	
UEEEL0017	Repair and maintain mechanical components of	40
	electrical machines*	
UEEEL0022	Supply effective and efficient lighting products for	40
	domestic and small commercial applications*	
UEEEL0026	Align and install traction lift equipment*	20
UEEEL0033	Conduct electrical tests on LV electrical machines*	40
UEEEL0034	Conduct mechanical tests on electrical machines and	40
115551 00 45	components*	
UEEEL0045	Diagnose and rectify faults in traction lift systems*	80
UEEEL0046	Find and repair faults in LV d.c. electrical apparatus	60
115551 00 40	and circuits*	40
UEEEL0048	Install and maintain emergency lighting systems*	40
UEEEL0049	Install and maintain emergency safety systems*	60
UEEEL0052	Maintain and service traction lift systems and	40
LIEFELOOFO	equipment*	CO.
UEEEL0053	Maintain operation of electrical marine equipment and	60
	systems*	

UEEEL0054	Maintain operation of electrical mining equipment and systems*	60
UEEEL0055	Overhaul and repair major switchgear and control gear*	60
UEEEL0056	Place and connect electrical coils*	40
UEEEL0061	Provide advice on the application of energy efficient	20
	lighting for ambient and aesthetic effect*	
UEEEL0066	Rewind LV direct current machines*	60
UEEEL0067	Rewind single phase machines*	40
UEEEL0068	Rewind three phase low voltage induction machines*	60
UEEEL0069	Select and arrange equipment for special LV electrical	60
	installations*	
UEEEL0074	Wind electrical coils*	40
UEEHA0001	Conduct detailed inspection of electrical installations for hazardous areas*	40
UEEHA0002	Conduct visual and close inspection of electrical installations for hazardous areas*	40
UEEHA0003	Determine the explosion-protection requirements to meet a specified classified hazardous area*	40
UEEHA0004	Enter a classified hazardous area to undertake work related to electrical equipment	40
UEEHA0005	Install explosion-protected equipment and associated apparatus and wiring systems*	60
UEEHA0006	Maintain equipment associated with hazardous areas*	60
UEEIC0002	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices*	
UEEIC0011	Develop electrical integrated systems*	20
UEEIC0013	Develop, enter and verify discrete control programs for programmable controllers*	60
UEEIC0024	Plan the electrical installation of integrated systems*	20
UEEIC0038	Solve problems in density/level measurement components and systems*	40
UEEIC0039	Solve problems in flow measurement components and systems*	40
UEEIC0041	Solve problems in pressure measurement components and systems*	40
UEEIC0043	Solve problems in temperature measurement components and systems*	40
UEEIC0047	Use instrumentation drawings, specifications, standards and equipment manuals*	40
UEERA0035	Establish the basic operating conditions of air conditioning systems*	20
UEERA0036	Establish the basic operating conditions of vapour compression systems*	60
UEERA0059	Prepare and connect refrigerant tubing and fittings*	40

UEERE0016	Install, configure and commission LV grid-connected	40
LIFEDEOO33	photovoltaic power systems*	20
UEERE0022	Solve basic problems in photovoltaic energy apparatus and systems*	20
UEERS0001	Assemble and wire internal electrical rail signalling	30
	equipment*	
UEERS0011	Install and maintain rail track circuit leads and bonds*	30
UEERS0017	Repair rail signalling power and control cables*	40
UEERS0019	Test copper rail signalling cables*	20
UETTDRIS43	Perform low voltage field switching operation to a	50
	given schedule*	
UETTDRIS44	Perform HV field switching operation to a given	40
	schedule*	
UETTDRIS47	Sample, test, filter and reinstate insulating oil*	40
UETTDRIS67	Solve problems in energy supply network equipment*	80
UETTDRIS68	Solve problems in energy supply network protection	40
	equipment and systems*	
UETTDRSB23	Install and maintain substation direct current systems*	30
UETTDRSB29	Maintain capacitor bank equipment for voltage	40
	regulation*	
UETTDRSB39	Perform power system substation switching operation	50
	to a given schedule*	
Group C: Genera		Weighting Points
UEECD0063	Write work activity reports	20
UEECO0001	Estimate electrotechnology projects	40
UEEEL0007	Develop detailed electrical drawings*	60
UEEEL0027	Carry out low voltage electrical field testing and report findings*	60
UEEEL0029	Conduct compliance inspection of LV electrical	40
	installations with demand exceeding 100 A per phase*	
UEEEL0030	Conduct compliance inspection of single phase LV	60
	electrical installations*	
UEEEL0031	Conduct compliance inspection of special LV electrical installations*	60
UEEEL0032	Conduct electrical tests on HV electrical machines*	60
UEEEL0036	Design effective and efficient lighting for residential	20
	and commercial buildings*	
UEEEL0040	Develop compliance policies and plans to conduct an	80
	electrical contracting business*	
UEEEL0044	Diagnose and rectify faults in complex lift systems*	40
UEEEL0050	Install and replace low voltage current transformer	20
	metering*	
UEEEL0051	Investigate and report on electrical incidents and causes*	60
UEEEL0057	Plan electrical installations with a low voltage demand	40
OLLLLUUJ/	up to 400 A per phase*	40
	LUDIO 400 A DELDIASE	1

UEEEL0059	Plan low voltage switchboard and control panel layouts*	40
UEEEL0060	Prepare quotations for the supply of effective and efficient lighting products for lighting projects*	20
UEEEL0063	Provide photometric data for illumination system design	60
UEEEL0064	Rewind HV three phase induction machines rated for voltages above 3.3 kV*	60
UEEEL0065	Rewind HV three phase induction machines rated for voltages to 3.3 kV*	60
UEEEL0070	Select effective and efficient light sources and luminaries for given locations and designs*	60
UEEEL0071	Select low voltage power factor correction equipment*	40
UEEEL0072	Set up and place LV electrical apparatus and associated circuits into service*	40
UEEEL0073	Verify compliance and functionality of special LV electrical installations*	40
UEEIC0009	Develop an electrical integrated system interface for access through a touch screen*	20
UEEIC0012	Develop structured programs to control external devices*	40
UEEIC0014	Develop, enter and verify programs in supervisory control and data acquisition systems*	60
UEEIC0015	Develop, enter and verify word and analogue control programs for programmable logic controllers*	60
UEEIC0018	Diagnose and rectify faults in digital controls systems*	60
UEEIC0020	Fault find and repair analogue circuits and components in electronic control systems*	60
UEEIC0026	Provide solutions to fluid circuit operations*	60
UEEIC0027	Provide solutions to pneumatic-hydraulic system operations*	80
UEEIC0028	Provide solutions to problems in industrial control systems*	60
UEEIC0034	Set up industrial field control devices*	60
UEEIC0040	Solve problems in polyphase electronic power control circuits*	60
UEEIC0042	Solve problems in single phase electronic power control circuits*	60
UEERE0003	Assess energy loads and uses for energy efficiency in commercial facilities*	40
UEERE0004	Assess energy loads and uses for energy efficiency in industrial properties and enterprises*	40
UEERE0005	Assess energy loads and uses for energy efficiency in residential, office and retail premises*	40
UEERE0011	Design grid-connected photovoltaic power supply systems*	60

UEERE0014	Develop strategies to address sustainability issues for	20
	electrical installations*	

UEE41620 - Certificate IV in Renewable Energy (Release 1)

Packaging Rules

A total of 1280 weighting points comprising:

740 core weighting points listed below; plus

540 general elective weighting points from the general elective units listed below.

Choose a total of 540 weighting points elective units from the list below, of which between 0 and 160 weighting points can be taken from Group A; between 0 and 320 weighting points can be taken from Group B; and between 220 and 380 weighting points can be taken from Group C.

Up to 220 weighting points of the general elective units Group A , may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided that selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points, unless directed from the Electrotechnology Industry Reference Committee (IRC).

There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

Core units		Weighting Points
UEECD0007	Apply work health and safety regulations, codes and	20
	practices in the workplace	
UEECD0010	Compile and produce an energy sector detailed report	60
UEECD0016	Document and apply measures to control WHS risks	20
	associated with electrotechnology work*	
UEECD0019	Fabricate, assemble and dismantle utilities industry	40
	components*	
UEECD0020	Fix and secure electrotechnology equipment*	20
UEECD0024	Implement and monitor energy sector WHS policies	20
	and procedures	
UEECD0025	Lay wiring/cabling and terminate accessories for extra-	40
	low voltage (ELV) circuits*	
UEECD0027	Participate in development and follow a personal	20
	competency development plan	
UEECD0043	Solve problems in direct current circuits*	80

UEECD0045	Solve problems in multiple path extra-low voltage (ELV) a.c. circuits*	40
UEECD0051	Use drawings, diagrams, schedules, standards, codes and specifications*	40
UEEEL0019	Solve problems in direct current (d.c.) machines*	30
UEEEL0021	Solve problems in magnetic and electromagnetic	30
	devices*	
UEERE0015	Implement and monitor energy sector environmental	20
	and sustainable policies and procedures	
UEERE0022	Solve basic problems in photovoltaic energy apparatus	20
	and systems*	
UEERE0025	Carry out basic repairs to renewable energy (RE)	80
	apparatus*	
UEERE0034	Diagnose and rectify faults in renewable energy (RE)	60
	control systems*	
UEERE0046	Solve problems in stand-alone renewable energy (RE)	60
	systems*	
UEERE0048	Verify compliance and functionality of an extra-low	40
	voltage renewable energy installation*	
Group A: Importe	ed and common elective units.	Weighting Points
BSBCUS201	Deliver a service to customers	20
CPCCWHS1001	Prepare to work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
ICTICT203	Operate application software packages	20
UEECD0011	Comply with scheduled and preventative maintenance	20
	program processes	
UEECD0035	Provide basic instruction in the use of	20
	electrotechnology apparatus	
UEECO0002	Maintain documentation	20
UEECO0015	Provide quotations for installation or service jobs	20
UEECO0017	Source and purchase material/parts for installation or	20
	service jobs	
Group B: Qualification	ation elective units.	Weighting Points
UEECD0030	Prepare electrotechnology/utilities drawings using	60
	manual drafting and CAD equipment and software*	
UEECD0031	Prepare engineering drawings using manual drafting	60
	and CAD for electrotechnology applications*	
UEEIC0013	Develop, enter and verify discrete control programs	60
	for programmable controllers*	
UEERE0017	Maintain and repair facilities associated with remote	120
	area essential service operations*	
UEERE0024	Attend to breakdowns in remote area power supplies (RAPS)*	20
UEERE0026	Conduct checks in the demand side use of remote	40
	area power supplies (RAPS)*	

UEERE0036	Install small wind energy conversion systems rated up to 10 kW for ELV stand-alone applications*	20
UEERE0039	Install, set up and maintain ELV micro-hydro systems rated up to 6.4 kW*	20
UEERE0041	Maintain operation of remote area power generation plant*	120
UEERE0043	Plan periodic maintenance schedules of remote area power supplies (RAPS)*	40
UEERE0045	Solve basic problems in micro-hydro systems*	20
UEERE0047	Solve problems in wind energy conversion systems (WECS) rated up to 10 kW*	60
UEERL0001	Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply*	20
UEERL0002	Attach cords, cables and plugs to electrical equipment for connection to 1000 V a.c. or 1500 V d.c.*	20
UEERL0003	Conduct in-service safety testing of electrical cord	20
	connected equipment and cord assemblies*	
Group C: Qualifica	connected equipment and cord assemblies*	Weighting Points
	connected equipment and cord assemblies*	Weighting Points 60
Group C: Qualifica	connected equipment and cord assemblies* tion elective units. Produce detailed electrotechnology/utilities drawings	
Group C: Qualifica UEECD0032	connected equipment and cord assemblies* tion elective units. Produce detailed electrotechnology/utilities drawings using CAD equipment and software*	60
Group C: Qualifica UEECD0032 UEECD0047	connected equipment and cord assemblies* tion elective units. Produce detailed electrotechnology/utilities drawings using CAD equipment and software* Supervise and coordinate energy sector work activities	60 40
Group C: Qualification UEECD0032 UEECD0047 UEECO0001	connected equipment and cord assemblies* tion elective units. Produce detailed electrotechnology/utilities drawings using CAD equipment and software* Supervise and coordinate energy sector work activities Estimate electrotechnology projects Prepare specifications for the supply of materials and equipment for electrotechnology projects Develop, enter and verify programs in supervisory	60 40 40
Group C: Qualification UEECD0032 UEECD0047 UEECO0001 UEECO0013	connected equipment and cord assemblies* tion elective units. Produce detailed electrotechnology/utilities drawings using CAD equipment and software* Supervise and coordinate energy sector work activities Estimate electrotechnology projects Prepare specifications for the supply of materials and equipment for electrotechnology projects	40 40 40 40
Group C: Qualification UEECD0032 UEECD0047 UEECO0001 UEECO0013 UEEIC0014	connected equipment and cord assemblies* tion elective units. Produce detailed electrotechnology/utilities drawings using CAD equipment and software* Supervise and coordinate energy sector work activities Estimate electrotechnology projects Prepare specifications for the supply of materials and equipment for electrotechnology projects Develop, enter and verify programs in supervisory control and data acquisition systems* Develop, enter and verify word and analogue control	60 40 40 40 60

UEE42020 - Certificate IV in Electrical - Photovoltaic systems (Release 1)

Packaging Rules

A total of 440 weighting points comprising:

260 core weighting points listed below; plus

180 general elective weighting points from the general elective units listed below.

Choose a total of 180 weighting points elective units from the list below, of which between 0 and 90 weighting points can be taken from Group A; between 0 and 90 weighting points can be taken from Group B; and between 90 and 180 weighting points can be taken from Group C (or all electives units of 180 weighting points can be taken from Group C).

Up to 90 weighting points of the general elective units Group A , may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided that selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points, unless directed from the Electrotechnology Industry Reference Committee (IRC).

There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

Core units		Weighting Points
UEECD0010	Compile and produce an energy sector detailed report	60
UEECD0024	Implement and monitor energy sector WHS policies and procedures	20
UEECD0027	Participate in development and follow a personal competency development plan	20
UEEEL0013	Install, set up and commission interval metering*	20
UEERE0011	Design grid-connected photovoltaic power supply systems*	60
UEERE0015	Implement and monitor energy sector environmental and sustainable policies and procedures	20
UEERE0016	Install, configure and commission LV grid-connected photovoltaic power systems*	40
UEERE0022	Solve basic problems in photovoltaic energy apparatus and systems*	20
Group A: Imported	and common elective units	Weighting Points
BSBCUS201	Deliver a service to customers	20

CPCCWHS1001	Prepare to work safely in the construction industry	10
HLTAID001	Provide cardiopulmonary resuscitation	10
ICTICT203	Operate application software packages	20
UEECD0011	Comply with scheduled and preventative maintenance	20
	program processes	
UEECD0035	Provide basic instruction in the use of	20
	electrotechnology apparatus	
UEECO0002	Maintain documentation	20
UEECO0015	Provide quotations for installation or service jobs	20
UEECO0017	Source and purchase material/parts for installation or service jobs	20
Group B: Qualificat	,	Weighting Points
UEECD0030	Prepare electrotechnology/utilities drawings using	60
	manual drafting and CAD equipment and software*	
UEECD0031	Prepare engineering drawings using manual drafting	60
LIFECCOORS	and CAD for electrotechnology applications*	40
UEECS0033	Use engineering applications software on personal computers	40
UEEEL0069	Select and arrange equipment for special LV electrical	60
	installations*	
UEEIC0002	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices*	
UEEIC0013	Develop, enter and verify discrete control programs	60
	for programmable controllers*	
UEERE0025	Carry out basic repairs to renewable energy (RE)	80
	apparatus*	
UEERE0034	Diagnose and rectify faults in renewable energy (RE)	60
	control systems*	
UEERE0035	Install ELV stand-alone photovoltaic power systems*	60
UEERE0036	Install small wind energy conversion systems rated up	20
	to 10 kW for ELV stand-alone applications*	
UEERE0037	Install, configure and commission LV micro-hydro	20
LIFERESSES	systems rated up to 6.4 kW*	10
UEERE0038	Install, configure and commission LV wind energy	40
LIFEDERARA	conversion systems rated up to 10 kW*	20
UEERE0039	Install, set up and maintain ELV micro-hydro systems	20
LIEEDEOO 4E	rated up to 6.4 kW*	20
UEERE0045 UEERE0046	Solve problems in micro-hydro systems*	60
UEEREUU40	Solve problems in stand-alone renewable energy (RE) systems*	00
UEERE0047	Solve problems in wind energy conversion systems	60
	(WECS) rated up to 10 kW*	
UEERE4001	Install, maintain and fault find battery storage systems	60
	for grid-connected photovoltaic systems*	
Group C: Qualificat	tion elective units	Weighting Points

UEECD0032	Produce detailed electrotechnology/utilities drawings	60
	using CAD equipment and software*	
UEECO0001	Estimate electrotechnology projects	40
UEECO0013	Prepare specifications for the supply of materials and	40
	equipment for electrotechnology projects	
UEEEL0007	Develop detailed electrical drawings*	60
UEEEL0029	Conduct compliance inspection of LV electrical	40
	installations with demand exceeding 100 A per phase*	
UEEEL0030	Conduct compliance inspection of single phase LV	60
	electrical installations*	
UEEEL0031	Conduct compliance inspection of special LV electrical	60
	installations*	
UEEEL0040	Develop compliance policies and plans to conduct an	80
	electrical contracting business*	
UEEEL0050	Install and replace low voltage current transformer	20
	metering*	
UEEEL0051	Investigate and report on electrical incidents and	60
	causes*	
UEEEL0057	Plan electrical installations with a low voltage demand	40
	up to 400 A per phase*	
UEEEL0073	Verify compliance and functionality of special LV	40
	electrical installations*	
UEEIC0014	Develop, enter and verify programs in supervisory	60
	control and data acquisition systems*	
UEEIC0015	Develop, enter and verify word and analogue control	60
	programs for programmable logic controllers*	
UEERE0014	Develop strategies to address sustainability issues for	20
	electrical installations*	

UEE50511 - Diploma of Electronics and Communications Engineering (Release 4)

Packaging Rules

Completion requirements

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

- All the Core competency standard units, defined in the Core Competency Standard Units table below and
- A combination of Elective competency standard units to achieve a total weighting of 1460 points in accordance with the Elective Competency Standard Units table below.

Core Competency Standard Units		Weighting Points
All Core competency	standard units to be achieved	
UEENEEE038B	Participate in development and follow a personal competency development plan	20
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEH167A	Commission electronics and communications systems	20
UEENEEH168A	Modify - redesign of electronics and communications systems	20
UEENEEK145A	Implement and monitor energy sector environmental and sustainable policies and procedures	20
Total points in core		140

Elective Competency Standard Units

Complete Elective units to achieve a total of weighting of 1460 points from the following groups:

Gro	Group		Maximum points
Α	Imported and Common Elective Units	0	270
	Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 5. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.		

B Qualification Elec	ctive Units	0	920
		580	
D Qualification Elective Units 280		1200	
Group A Imported ar	nd Common Elective Units nits to a maximum weighting of 270		Weighting Points
BSBINM501A	Manage an information or knowledge ma	nagement	50
	system	3	
BSBINN502A	Build and sustain an innovative work envir	onment	50
BSBMGT502B	Manage people performance		70
BSBMGT516C	Facilitate continuous improvement		60
BSBWOR502B	Ensure team effectiveness		60
ICTTEN3056A	Install telecommunications network equip	ment	40
MSS402001A	Apply competitive systems and practices		20
MSS402020A	Apply quick changeover procedures		20
MSS402021A	Apply Just in Time procedures		20
MSS402040A	Apply 5S procedures		20
MSS402080A	Undertake root cause analysis		20
MSS402081A	Contribute to the application of a proactive strategy	e maintenance	20
UEENEEC001B	Maintain documentation		20
UEENEEC002B	Source and purchase material/parts for inservice jobs	stallation or	20
UEENEEC003B	Provide quotations for installation or servi	ce jobs	20
UEENEEC010B	Deliver a service to customers		20
UEENEED101A	Use computer applications relevant to a w	rorkplace	20
UEENEEE009B	Comply with scheduled and preventative program processes	maintenance	20
UEENEEE020B	Provide basic instruction in the use of elecapparatus	trotechnology	20
	Imported units from other training package accredited courses can be added to this general must be selected from qualifications where packaged at AQF level 5. If units have not a weighting by the relevant EE-Oz Industrial Advisory Committee, their weighting will be	roup, but they e the unit is first being assigned y Technical	points
Group B Qualification	Note: For further information see Applicat Flexibility Formula, UEE11 Electrotechnolog Package, Version 1, Volume 1 Qualification Elective Units	y Training	Weighting
·	nits to a maximum weighting of 920		Points
UEENEEA101A	Assemble electronic components		40
UEENEEA102A	Select electronic components for assembly	/	20

UEENEEA103A	Set up and check electronic component assembly machines	40
UEENEEA104A	Modify electronic sub assemblies	40
UEENEEA105A	Conduct quality and functional tests on assembled	20
	electronic apparatus	
UEENEEA106A	Use lead-free soldering techniques	40
UEENEEB101A	Operate and maintain amateur radio communication	40
	stations	
UEENEED102A	Assemble, set-up and test computing devices	80
UEENEED104A	Use engineering applications software on personal	40
	computers	
UEENEED112A	Support computer hardware and software for	120
	engineering applications	
UEENEED129A	Develop web pages for engineering applications	40
UEENEED130A	Select, install, configure and test multimedia components	40
UEENEED143A	Install and configure a client computer operating system	40
	and software	
UEENEED146A	Set up and configure basic local area network (LAN)	80
UEENEED153A	Set up, configure and test biometric devices	40
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40
	components	
UEENEEE104A	Solve problems in d.c. circuits	80
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and	40
	specifications	40
UEENEEE108A	Lay wiring/cabling and terminate accessories for extra- low voltage (ELV) circuits	40
UEENEEE121A	Plan an integrated cabling installation system	40
UEENEEE122A	Carry out preparatory energy sector work activities	60
UEENEEE123A	Solve basic problems electronic and digital equipment and circuits	80
UEENEEE179A	Identify and select components, accessories and materials	20
	for energy sector work activities	
UEENEEF102A	Install and maintain cabling for multiple access to	120
	telecommunication services	
UEENEEF104A	Install and modify performance data communication	40
	copper cabling	
UEENEEF105A	Install and modify optical fibre performance data	40
	communication cabling	
UEENEEF106A	Solve problems in voice and data communications circuits	40
UEENEEF107A	Set up and configure the wireless capabilities of	40
	communications and data storage devices	
UEENEEF108A	Select and arrange equipment for wireless	40
	communication networks	
UEENEEF109A	Install and connect data and voice communication	40
	equipment	
		1

UEENEEF110A	Select and arrange data and voice equipment for local	40
	area networks	
UEENEEF111A	Test, report and rectify faults in data and voice installations	40
UEENEEF114A	Set up and configure basic data communication systems	40
UEENEEH101A	Repair basic computer equipment faults by replacement of modules/sub-assemblies	40
UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40
UEENEEH103A	Repair routine business equipment faults	120
UEENEEH104A	Set up and test residential video/audio equipment	40
UEENEEH105A	Verify functionality and compliance of custom electronic installations	40
UEENEEH106A	Assemble and set up fixed video/audio components and systems in buildings and premises	120
UEENEEH107A	Repair predictable faults in general electronic apparatus	40
UEENEEH108A	Assemble and install reception antennae and signal distribution equipment	60
UEENEEH109A	Set up and test gaming and game equipment	60
UEENEEH110A	Install commercial video/audio system components	120
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40
UEENEEH112A	Troubleshoot digital sub-systems	80
UEENEEH113A	Troubleshoot amplifiers in an electronic apparatus	80
UEENEEH114A	Troubleshoot resonance circuits in an electronic apparatus	80
UEENEEH115A	Develop software solutions for microcontroller based systems	60
UEENEEH116A	Find and repair microwave amplifier section faults in electronic apparatus	40
UEENEEH117A	Carry out repairs of predictable faults in video and audio replay/recording apparatus	120
UEENEEH118A	Fault find and repair electronic apparatus	40
UEENEEH119A	Repair predictable faults in television receivers	120
UEENEEH120A	Fault find and repair gaming and games equipment	80
UEENEEH121A	Fault find and repair high volume office equipment	120
UEENEEH122A	Fault find and repair remote control apparatus	60
UEENEEH123A	Fault find and repair microwave heating apparatus	40
UEENEEH124A	Repair predictable faults in audio components	40
UEENEEH127A	Set up and adjust commercial radio frequency (RF) transmission and reception systems	60
UEENEEH128A	Install and test microwave antennae and waveguides	60
UEENEEH138A	Fault find and repair complex power supplies	40
UEENEEH139A	Troubleshoot basic amplifier circuits	40
UEENEEH142A	Solve oscillator problems	40
UEENEEH146A	Solve fundamental electronic communications system problems	40

UEENEEH150A	Assemble and set up basic security systems	80
UEENEEH151A	Install large security systems	100
UEENEEH152A	Enter instructions and test wired and wireless security	40
	systems	
UEENEEH154A	Program and commission commercial security systems	60
UEENEEH155A	Program and commission commercial access control	60
	security systems	
UEENEEH156A	Program and commission commercial security closed	60
	circuit television systems	
UEENEEH161A	Install fire detection and warning system apparatus	40
UEENEEH162A	Verify compliance and functionality of fire protection	60
	system installations	
UEENEEH163A	Enter and verify programs for fire protection systems	40
UEENEEH164A	Commission large fire protection systems	40
UEENEEH165A	Troubleshoot fire protection systems	40
UEENEEH166A	Troubleshoot microcontroller based hardware systems	40
UEENEEH169A	Solve problems in basic electronic circuits	100
UEENEEH171A	Troubleshoot faults in television receivers	120
UEENEEH172A	Troubleshoot communication systems	80
UEENEEH173A	Troubleshoot professional audio reproduction	120
	components	
UEENEEH174A	Troubleshoot audio - video recording equipment	120
UEENEEH187A	Solve problems in electronic musical equipment circuits	40
UEENEEI101A	Use instrumentation drawings, specification, standards	40
	and equipment manuals	
UEENEEI116A	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices	
UEENEEI117A	Calibrate, adjust and test measuring instruments	40
UEENEEI150A	Develop, enter and verify discrete control programs for	60
	programmable controllers	
UEENEEP024A	Attach cords and plugs to electrical equipment for	20
	connection to a single phase 230 Volt supply	
UEENEEP025A	Attach cords, cables and plugs to electrical equipment for	20
Group C Qualification	Elective Units	Weighting
		Points
	inimum weighting of 260 and a maximum weighting of	
UEENEEC004B	Prepare specifications for the supply of materials and	40
UEENEEC005B		40
UEENEED103A	<u> </u>	40
UEENEED110A	, , ,	120
	·	120
Group C Qualification Complete units to a m 580 UEENEEC004B UEENEEC005B UEENEED103A	connection to 1000 Va.c. or 1500 Vd.c. supply	Weighting Points 40 40 40 120

UEENEEE110A	Develop and implement energy sector maintenance programs	60
UEENEEE114A	Supervise and coordinate energy sector work activities	40
UEENEEE118A	Establish, maintain and evaluate energy sector OHS	60
	systems	
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEH129A	Fault find and repair navigation systems	60
UEENEEH130A	Fault find and repair satellite-based surveillance and	60
	observation systems	
UEENEEH131A	Fault find and repair radar apparatus and systems	120
UEENEEH132A	Fault find and repair global positioning systems	60
UEENEEH133A	Fault find and repair telecommunication apparatus and	60
	systems	
UEENEEH134A	Fault find and repair electronic medical equipment	120
UEENEEH135A	Design custom electronic equipment installations	120
UEENEEH136A	Design commercial video/audio installations	120
UEENEEH137A	Program and commission commercial video/audio	40
	systems	
UEENEEH140A	Fault find and repair sonar apparatus and systems	120
UEENEEH153A	Program and test large security systems	120
UEENEEH175A	Troubleshooting in security system installations	60
UEENEEH176A	Diagnose and rectify faults in electronic display circuits	60
UEENEEH177A	Diagnose and rectify faults in recording and replay	60
	equipment	
UEENEEH178A	Diagnose and rectify faults in camera circuits and	60
	equipment	
UEENEEH179A	Diagnose and rectify faults in digital television circuits and	80
	apparatus	
UEENEEH180A	Diagnose and rectify faults in digital transmission circuits	80
	and systems	
UEENEEH186A	Commission satellite and microwave communication	40
	systems	
UEENEEI155A	Develop structured programs to control external devices	40
UEENEEI157A	Configure and maintain industrial control system	60
	networks	
Group D Qualification Elective Units		Weighting
		Points
You must complete	units to a minimum weighting of 280 and to a maximum of	
1200 points		
UEENEEC006B	Prepare tender submissions for electrotechnology	60
	projects	
UEENEED147A	Develop energy sector directory services	80
UEENEED150A	Develop industrial control programs for microcomputer	60
	equipped devices	
UEENEED151A	Provide programming solution for computer systems	60
	engineering problems	

UEENEED155A	Develop and validate biometric equipment/systems installation	120
UEENEEE015B	Develop design briefs for electrotechnology projects	40
UEENEEE125A	Provide engineering solutions for problems in complex multiple path circuits	60
UEENEEE126A	Provide solutions to basic engineering computational problems	60
UEENEEE160A	Provide engineering solutions for uses of materials and thermodynamic effects	80
UEENEEE163A	Analyse materials for suitability in electrical equipment	80
UEENEEE072B	Write specifications for electronics and communications engineering projects	40
UEENEEH145A	Develop engineering solutions to analogue electronic problems	80
UEENEEH148A	Design and develop advanced digital systems	40
UEENEEH149A	Develop engineering solutions to audio electronic problems	60
UEENEEH157A	Develop basic plans for integrating security systems	40
UEENEEH158A	Design integrated security systems	40
UEENEEH159A	Design integrated complex security systems for multiple sites	60
UEENEEH181A	Design electronic printed circuit boards	40
UEENEEH182A	Develop engineering solutions to RF amplifiers problems	40
UEENEEH183A	Analyse the performance of wireless-based electronic - communication systems	40
UEENEEH188A	Design and develop electronics - computer systems projects	40
UEENEEH190A	Provide engineering solutions to air traffic control system problems	40
UEENEEH191A	Diagnose and rectify faults in air navigation circuits and systems	120
UEENEEH192A	Develop solutions for air surveillance apparatus and systems	120
UEENEEI153A	Design and configure Human-Machine Interface (HMI) networks	60
UEENEEI156A	Develop and test code for microcontroller devices	60
UEENEEE161A	Analyse static and dynamic parameters of electrical equipment	80
UEENEED111A	Develop, implement and test object oriented code	140
UEENEEH189A	Provide Gate Array solutions for complex electronics systems	60

UEE50420 - Diploma of Electrical Engineering (Release 1)

Packaging Rules

A total of **760 weighting points** comprising:

160 core weighting points listed below; plus

600 general elective weighting points from the general elective units listed below.

Choose a total of 600 weighting points elective units from the list below, of which between 0 and 270 weighting points can be taken from Group A; between 0 and 100 weighting points can be taken from Group B; between 0 and 240 weighting points can be taken from Group C; and between 260 and 600 weighting points can be taken from Group D (or all elective units between 0 and 600 weighting points must can be taken from Group D).

Up to 270 weighting points of the general elective units Group A , may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points, unless directed from the Electrotechnology Industry Reference Committee (IRC).

There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

Core units		Weighting Points
UEECD0010	Compile and produce an energy sector detailed report	60
UEECD0024	Implement and monitor energy sector WHS policies and procedures	20
UEECD0027	Participate in development and follow a personal competency development plan	20
UEECD0060	Write specifications for electrotechnology engineering projects	40
UEERE0013	Develop strategies to address environmental and sustainability issues in the energy sector	20
Group A: Imported and common elective units		Weighting Points
BSBCUS201	Deliver a service to customers	20
BSBINM501	Manage an information or knowledge management system	50
BSBINN502	Build and sustain an innovative work environment	50
BSBMGT502	Manage people performance	70
BSBMGT516	Facilitate continuous improvement	60
BSBWOR502	Lead and manage team effectiveness	60
ICTICT203	Operate application software packages	20

UEECD0011	Comply with scheduled and preventative maintenance	20
LIFECDOOSE	program processes	20
UEECD0035	Provide basic instruction in the use of	20
UEECO0002	electrotechnology apparatus	20
UEECO0015	Maintain documentation	20
	Provide quotations for installation or service jobs	
UEECO0017	Source and purchase material/parts for installation or service jobs	20
Group B: Genera	al elective units	Weighting Points
UEEAS0007	Assemble, mount and connect control gear and switchgear*	40
UEEAS0008	Fabricate and assemble bus bars*	40
UEEAS0009	Mount and wire control panel equipment*	40
UEECD0028	Plan an integrated cabling installation system*	40
UEECS0033	Use engineering applications software on personal computers	40
UEEDV0005	Install and maintain cabling for multiple access to telecommunication services*	80
UEEDV0008	Install, modify and verify coaxial and structured communication copper cabling*	40
UEEEC0003	Assemble and set up basic security systems*	80
UEEEC0060	Repairs basic electronic apparatus faults by replacement of components*	40
UEEEC0075	Troubleshoot single phase input d.c power supplies*	40
UEEEL0004	Carry out basic repairs to electrical components and	40
OLLLL0004	equipment*	40
UEEEL0013	Install, set up and commission interval metering*	20
UEEEL0016	Provide advice on effective and energy efficient lighting products	20
UEEEL0017	Repair and maintain mechanical components of electrical machines*	40
UEEEL0022	Supply effective and efficient lighting products for domestic and small commercial applications*	40
UEEEL0026	Align and install traction lift equipment*	20
UEEEL0033	Conduct electrical tests on LV electrical machines*	40
UEEEL0034	Conduct mechanical tests on electrical machines and components*	40
UEEEL0045	Diagnose and rectify faults in traction lift systems*	80
UEEEL0046	Find and repair faults in LV d.c. electrical apparatus and circuits*	60
UEEEL0048	Install and maintain emergency lighting systems*	40
UEEEL0049	Install and maintain emergency safety systems*	60
UEEEL0052	Maintain and service traction lift systems and equipment*	40
UEEEL0053	Maintain operation of electrical marine equipment and systems*	60

UEEEL0054	Maintain operation of electrical mining equipment and systems*	60
UEEEL0055	Overhaul and repair major switchgear and control gear*	60
UEEEL0056	Place and connect electrical coils*	40
UEEEL0061	Provide advice on the application of energy efficient lighting for ambient and aesthetic effect*	20
UEEEL0066	Rewind LV direct current machines*	60
UEEEL0067	Rewind single phase machines*	40
UEEEL0068	Rewind three phase low voltage induction machines*	60
UEEEL0069	Select and arrange equipment for special LV electrical installations*	60
UEEEL0074	Wind electrical coils*	40
UEEHA0001	Conduct detailed inspection of electrical installations for hazardous areas*	40
UEEHA0003	Determine the explosion-protection requirements to meet a specified classified hazardous area*	40
UEEHA0004	Enter a classified hazardous area to undertake work related to electrical equipment	40
UEEHA0005	Install explosion-protected equipment and associated apparatus and wiring systems*	60
UEEHA0006	Maintain equipment associated with hazardous areas*	60
UEEIC0002	Assemble, enter and verify operating instructions in microprocessor equipped devices*	20
UEEIC0011	Develop electrical integrated systems*	20
UEEIC0013	Develop, enter and verify discrete control programs for programmable controllers*	60
UEEIC0024	Plan the electrical installation of integrated systems*	20
UEEIC0038	Solve problems in density/level measurement components and systems*	40
UEEIC0039	Solve problems in flow measurement components and systems*	40
UEEIC0041	Solve problems in pressure measurement components and systems*	40
UEEIC0043	Solve problems in temperature measurement components and systems*	40
UEEIC0047	Use instrumentation drawings, specifications, standards and equipment manuals*	40
UEERA0035	Establish the basic operating conditions of air conditioning systems*	20
UEERA0036	Establish the basic operating conditions of vapour compression systems*	60
UEERA0059	Prepare and connect refrigerant tubing and fittings*	40
UEERE0016	Install, configure and commission LV grid-connected photovoltaic power systems*	40

UEERE0022	Solve basic problems in photovoltaic energy apparatus and systems*	20
UETTDRIS44	Perform HV field switching operation to a given schedule*	40
UETTDRIS67	Solve problems in energy supply network equipment*	80
UETTDRIS68	Solve problems in energy supply network equipment	40
02112111300	equipment and systems*	
Group C: General		Weighting Points
UEECO0001	Estimate electrotechnology projects	40
UEEEL0007	Develop detailed electrical drawings*	60
UEEEL0027	Carry out low voltage electrical field testing and report findings*	60
UEEEL0029	Conduct compliance inspection of LV electrical	40
	installations with demand exceeding 100 A per phase*	
UEEEL0030	Conduct compliance inspection of single phase LV electrical installations*	60
UEEEL0031	Conduct compliance inspection of special LV electrical installations*	60
UEEEL0032	Conduct electrical tests on HV electrical machines*	60
UEEEL0036	Design effective and efficient lighting for residential and commercial buildings*	20
UEEEL0040	Develop compliance policies and plans to conduct an electrical contracting business*	80
UEEEL0044	Diagnose and rectify faults in complex lift systems*	40
UEEEL0050	Install and replace low voltage current transformer metering*	20
UEEEL0051	Investigate and report on electrical incidents and causes*	60
UEEEL0057	Plan electrical installations with a low voltage demand up to 400 A per phase*	40
UEEEL0059	Plan low voltage switchboard and control panel layouts*	40
UEEEL0060	Prepare quotations for the supply of effective and efficient lighting products for lighting projects*	20
UEEEL0063	Provide photometric data for illumination system design	60
UEEEL0064	Rewind HV three phase induction machines rated for voltages above 3.3 kV*	60
UEEEL0065	Rewind HV three phase induction machines rated for voltages to 3.3 kV*	60
UEEEL0070	Select effective and efficient light sources and luminaries for given locations and designs*	60
UEEEL0071	Select low voltage power factor correction equipment*	40
UEEEL0072	Set up and place LV electrical apparatus and associated circuits into service*	40

UEEEL0073	Verify compliance and functionality of special LV electrical installations*	40
UEEIC0009	Develop an electrical integrated system interface for access through a touch screen*	20
UEEIC0012	Develop structured programs to control external devices*	40
UEEIC0014	Develop, enter and verify programs in supervisory control and data acquisition systems*	60
UEEIC0015	Develop, enter and verify word and analogue control programs for programmable logic controllers*	60
UEEIC0018	Diagnose and rectify faults in digital controls systems*	60
UEEIC0020	Fault find and repair analogue circuits and components in electronic control systems*	60
UEEIC0026	Provide solutions to fluid circuit operations*	60
UEEIC0027	Provide solutions to pneumatic-hydraulic system operations*	80
UEEIC0028	Provide solutions to problems in industrial control systems*	60
UEEIC0034	Set up industrial field control devices*	60
UEEIC0040	Solve problems in polyphase electronic power control circuits*	60
UEEIC0042	Solve problems in single phase electronic power control circuits*	60
UEERE0003	Assess energy loads and uses for energy efficiency in commercial facilities*	40
UEERE0004	Assess energy loads and uses for energy efficiency in industrial properties and enterprises*	40
UEERE0005	Assess energy loads and uses for energy efficiency in residential, office and retail premises*	40
UEERE0011	Design grid-connected photovoltaic power supply systems*	60
UEERE0014	Develop strategies to address sustainability issues for electrical installations*	20
Group D: Genera	al elective units	Weighting Points
UEECD0013	Develop and implement energy sector maintenance programs	60
UEECD0036	Provide engineering solutions for problems in complex multiple path circuits	60
UEECD0039	Provide solutions to basic engineering computational problems*	60
UEECO0014	Prepare tender submissions for electrotechnology projects*	60
UEEEL0006	Develop detailed and complex drawings for electrical systems using CAD systems*	60
UEEEL0011	Evaluate performance of low voltage electrical apparatus*	40

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UEEEL0035	Design effective and efficient lighting for public, open	20
	and sports areas*	
UEEEL0037	Design electrical installations with a low voltage	40
	demand greater than 400 A per phase*	
UEEEL0062	Provide engineering solutions to problems in complex	60
	polyphase power circuits*	
UEEIC0001	Analyse complex electronic circuits controlling fluids	80
UEEIC0005	Configure and maintain industrial control system	60
	networks*	
UEEIC0010	Develop and test code for microcontroller devices	60
UEEIC0016	Diagnose and rectify faults in a.c. motor drive systems*	60
UEEIC0017	Diagnose and rectify faults in d.c. motor drive systems*	60
UEEIC0019	Diagnose and rectify faults in servo drive systems*	60
UEERE0029	Design micro-hydro systems rated to 6.4 kW*	60
UEERE0030	Design renewable energy (RE) heating systems*	120
UEERE0032	Design wind energy conversion systems (WECS) rated to 10 kW*	60
UETTDRIS69	Diagnose and rectify faults in energy supply	60
0211011303	apparatus*	
UETTDRIS70	Diagnose and rectify faults in electrical energy	60
	distribution systems*	
UETTDRIS71	Diagnose and rectify faults in electrical energy supply	60
	transmission systems*	
UETTDRIS72	Diagnose and rectify faults in distributed generation	60
	systems*	

UEE50720 - Diploma of Renewable Energy Engineering (Release 1)

Packaging Rules

A total of **760 weighting points** comprising:

240 core weighting points listed below; plus

520 general elective weighting points from the general elective units listed below.

Choose a total of 520 weighting points elective units from the list below, of which between 0 and 260 weighting points can be taken from Group A; between 0 and 100 weighting points must be taken from Group B; between 0 and 240 weighting points must be taken from Group C; and between 260 and 340 weighting points must be taken from Group D.

Up to 260 weighting points of the general elective units Group A , may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided that selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points, unless directed from the Electrotechnology Industry Reference Committee (IRC).

There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

Core units		Weighting Points
UEECD0010	Compile and produce an energy sector detailed report	60
UEECD0024	Implement and monitor energy sector WHS policies and procedures	20
UEECD0027	Participate in development and follow a personal competency development plan	20
UEECD0062	Write specifications for renewable energy engineering projects	40
UEERE0013	Develop strategies to address environmental and sustainability issues in the energy sector	20
UEERE0025	Carry out basic repairs to renewable energy (RE) apparatus*	80
Group A: Imported and common elective units		Weighting Points
BSBCUS201	Deliver a service to customers	20
BSBINM501	Manage an information or knowledge management system	50
BSBINN502	Build and sustain an innovative work environment	50

BSBMGT502	Manage people performance	70
BSBMGT516	Facilitate continuous improvement	60
BSBWOR502	Lead and manage team effectiveness	60
ICTICT203	Operate application software packages	20
UEECD0011	Comply with scheduled and preventative maintenance	20
	program processes	
UEECD0035	Provide basic instruction in the use of	20
	electrotechnology apparatus	
UEECO0002	Maintain documentation	20
UEECO0015	Provide quotations for installation or service jobs	20
UEECO0017	Source and purchase material/parts for installation or	20
	service jobs	
Group B: Qualificat	ion elective units	Weighting Points
UEECS0033	Use engineering applications software on personal	40
	computers	
UEEEC0060	Repairs basic electronic apparatus faults by	40
	replacement of components*	
UEEEC0075	Troubleshoot single phase input d.c power supplies*	40
UEEEL0013	Install, set up and commission interval metering*	20
UEEIC0002	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices*	
UEEIC0013	Develop, enter and verify discrete control programs	60
	for programmable controllers*	
UEERE0016	Install, configure and commission LV grid-connected	40
	photovoltaic power systems*	
UEERE0022	Solve basic problems in photovoltaic energy apparatus	20
	and systems*	
UEERE0034	Diagnose and rectify faults in renewable energy (RE)	60
	control systems*	
UEERE0035	Install ELV stand-alone photovoltaic power systems*	60
UEERE0036	Install small wind energy conversion systems rated up	20
	to 10 kW for ELV stand-alone applications*	
UEERE0037	Install, configure and commission LV micro-hydro	20
	systems rated up to 6.4 kW*	
UEERE0038	Install, configure and commission LV wind energy	40
	conversion systems rated up to 10 kW*	
UEERE0039	Install, set up and maintain ELV micro-hydro systems	20
	rated up to 6.4 kW*	
UEERE0045	Solve basic problems in micro-hydro systems*	20
UEERE0046	Solve problems in stand-alone renewable energy (RE) systems*	60
UEERE0047	Solve problems in wind energy conversion systems	60
	(WECS) rated up to 10 kW*	
UEERE5001	Design battery storage systems for grid-connected	80
	photovoltaic systems*	
Group C: Qualifica	tion elective units	Weighting Points

UEECO0001	Estimate electrotechnology projects	40
UEECO0013	Prepare specifications for the supply of materials and	40
	equipment for electrotechnology projects	
UEEEL0040	Develop compliance policies and plans to conduct an	80
	electrical contracting business*	
UEERE0003	Assess energy loads and uses for energy efficiency in commercial facilities*	40
UEERE0004	Assess energy loads and uses for energy efficiency in industrial properties and enterprises*	40
UEERE0005		40
UEEREUUUS	Assess energy loads and uses for energy efficiency in	40
	residential, office and retail premises*	
UEERE0011	Design grid-connected photovoltaic power supply	60
	systems*	
UEERE0014	Develop strategies to address sustainability issues for	20
	electrical installations*	
UEERE0015	Implement and monitor energy sector environmental	20
	and sustainable policies and procedures	
Group D: Qualific	ation elective units	Weighting Points
UEECO0014	Prepare tender submissions for electrotechnology	60
	projects*	
UEEEL0011	Evaluate performance of low voltage electrical	40
	apparatus*	
UEERE0029	Design micro-hydro systems rated to 6.4 kW*	60
UEERE0030	Design renewable energy (RE) heating systems*	120
UEERE0032	Design wind energy conversion systems (WECS) rated	60
	to 10 kW*	

UEE63011 - Advanced Diploma of Electrical Systems Engineering (Release 4)

Packaging Rules

Completion requirements

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

- All the Core competency standard units, defined in the Core Competency Standard Units table below and
- A combination of Elective competency standard units to achieve a total weighting of 580 points in accordance with the Elective Competency Standard Units table below.

Note: UEENEEG199A - Those holding an Unrestricted Electrical Fitter Licence or equivalent issued in an Australian State or Territory meet the requirements of this unit and its pre-requisite requirements.

Core Competency Standard Units		Weighting Points
All Core competency	standard units to be achieved	
UEENEED104A	Use engineering applications software on personal	40
	computers	
UEENEEE006B	Apply methods to maintain currency of industry	20
	developments	
UEENEEE011C	Manage risk in electrotechnology activities	60
UEENEEE015B	Develop design briefs for electrotechnology projects	40
UEENEEE071B	Write specifications for electrical engineering projects	40
UEENEEE080A	Apply industry and community standards to engineering	20
	activities	
UEENEEE081A	Apply material science to solving electrotechnology	60
	engineering problems	
UEENEEE082A	Apply physics to solving electrotechnology engineering	60
	problems	
UEENEEE083A	Establish and follow a competency development plan in	120
	an electrotechnology engineering discipline	
UEENEEE101A	Apply Occupational Health and Safety regulations, codes	20
	and practices in the workplace	
UEENEEE102A	Fabricate, assemble and dismantle utilities industry	40
	components	
UEENEEE104A	Solve problems in d.c. circuits	80
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and	40
	specifications	
UEENEEE117A	Implement and monitor energy sector OHS policies and	20
	procedures	
UEENEEE124A	Compile and produce an energy sector detailed report	60

UEENEEE125A	Provide engineering solutions for problems in complex multiple path circuits	60
		60
UEENEEE126A	Provide solutions to basic engineering computational	60
	problems	
UEENEEE137A	Document and apply measures to control OHS risks	20
	associated with electrotechnology work	
UEENEEG006A	Solve problems in single and three phase low voltage	80
	machines	
UEENEEG033A	Solve problems in single and three phase low voltage	60
	electrical apparatus and circuits	
UEENEEG063A	Arrange circuits, control and protection for general	40
	electrical installations	
UEENEEG101A	Solve problems in electromagnetic devices and related	60
022. (220.0.)	circuits	
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
UEENEEG106A	Terminate cables, cords and accessories for low voltage	40
	circuits	
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical	40
	apparatus and circuits	
UEENEEG109A	Develop and connect electrical control circuits	80
UEENEEG149A	Provide engineering solutions to problems in complex	60
	polyphase power circuits	
UEENEEG169A	Manage large electrical projects	40
UEENEEG170A	Plan large electrical projects	60
UEENEEG199A	Conduct compliance and functional verification of	40
	electrical apparatus and existing circuits	
UEENEEK132A	Develop strategies to address environmental and	20
	sustainability issues in the energy sector	
Total points in core		1580
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Elective Competency Standard Units

Complete Elective units to achieve a total of weighting of 580 points from the following groups:

Gro	pup	Minimum points	Maximum points
Α	Imported and Common Elective Units	0	220
	Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 6. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.		
В	Qualification Elective Units	0	160
C	Qualification Elective Units	0	160
D	Qualification Elective Units	0	160

Е	Qualification Elec	ctive Units	200	580
	You may select t	he majority of your elective units from this		
Gro	up A Imported ar	nd Common Electives Units		Weighting Points
You	ı may complete u	nits to a maximum weighting of 220		
BSB	BSBMGT502B Manage people performance		70	
BSB	INM501A	Manage an information or knowledge mana system	gement	50
BSB	MGT516C	Facilitate continuous improvement		60
BSB	INN502A	Build and sustain an innovative work environ	nment	50
BSB	WOR502B	Ensure team effectiveness		60
		Imported units from other training packages accredited courses can be added to this gromust be selected from qualifications where t packaged at AQF level 6. If units have not be a weighting by the relevant EE-Oz Industry Advisory Committee, their weighting will be Note: For further information see Application	up, but they he unit is first eing assigned Fechnical 10 points.	Up to 220 points
		Flexibility Formula, UEE11 Electrotechnology		
		Package, Version 1, Volume 1 Qualification F	ramework	
	up B Qualification		ramework	Weighting Points
You	ı may complete u	n Elective Units nits to a maximum weighting of 160		Points
You	•	nits to a maximum weighting of 160 Assemble, mount and connect control gear switchgear		
You	ı may complete u	n Elective Units nits to a maximum weighting of 160 Assemble, mount and connect control gear		Points
You UEE UEE	nay complete ui NEEA110A NEEA112A NEEA113A	nits to a maximum weighting of 160 Assemble, mount and connect control gear switchgear Fabricate and assemble bus bars Mount and wire control panel equipment	and	Points 40
You UEE UEE	I may complete ui INEEA110A INEEA112A	nits to a maximum weighting of 160 Assemble, mount and connect control gear switchgear Fabricate and assemble bus bars	and	Points 40 40
You UEE UEE UEE	nay complete ui NEEA110A NEEA112A NEEA113A	nits to a maximum weighting of 160 Assemble, mount and connect control gear switchgear Fabricate and assemble bus bars Mount and wire control panel equipment Select wiring systems and cables for low volt electrical installations Find and repair faults in LV d.c. electrical app	and tage general	Points 40 40 40
You UEE UEE UEE UEE	nay complete ui NEEA110A NEEA112A NEEA113A NEEG107A	nits to a maximum weighting of 160 Assemble, mount and connect control gear switchgear Fabricate and assemble bus bars Mount and wire control panel equipment Select wiring systems and cables for low volt electrical installations Find and repair faults in LV d.c. electrical approximations Carry out basic repairs to electrical components	and tage general paratus and	Points 40 40 40 60
You UEE UEE UEE UEE	i may complete ui NEEA110A NEEA112A NEEA113A NEEG107A	nits to a maximum weighting of 160 Assemble, mount and connect control gear switchgear Fabricate and assemble bus bars Mount and wire control panel equipment Select wiring systems and cables for low volt electrical installations Find and repair faults in LV d.c. electrical approximation circuits Carry out basic repairs to electrical compone equipment	and tage general paratus and ents and	Points 40 40 40 60 60 40
You UEE UEE UEE UEE	i may complete ui NEEA110A NEEA112A NEEA113A NEEG107A	nits to a maximum weighting of 160 Assemble, mount and connect control gear switchgear Fabricate and assemble bus bars Mount and wire control panel equipment Select wiring systems and cables for low volt electrical installations Find and repair faults in LV d.c. electrical approximations Carry out basic repairs to electrical components	and tage general coaratus and ents and tems	Points 40 40 40 60 60
You UEE UEE UEE UEE UEE	i may complete ui NEEA110A NEEA112A NEEA113A NEEG107A NEEG110A	nits to a maximum weighting of 160 Assemble, mount and connect control gear switchgear Fabricate and assemble bus bars Mount and wire control panel equipment Select wiring systems and cables for low volt electrical installations Find and repair faults in LV d.c. electrical approximation of electrical compone equipment Diagnose and rectify faults in traction lift systems.	and tage general caratus and ents and tems oment and	Points 40 40 40 60 60 40 80
You UEE UEE UEE UEE UEE UEE	i may complete ui NEEA110A NEEA112A NEEA113A NEEG107A NEEG110A NEEG111A	nits to a maximum weighting of 160 Assemble, mount and connect control gear switchgear Fabricate and assemble bus bars Mount and wire control panel equipment Select wiring systems and cables for low volt electrical installations Find and repair faults in LV d.c. electrical approximation of electrical compone equipment Diagnose and rectify faults in traction lift systems Maintain operation of electrical marine equipment Maintain operation of electrical marine equipment	and tage general caratus and ents and tems oment and oment and	Points 40 40 40 60 60 40 80 60
You UEE UEE UEE UEE UEE UEE UEE	i may complete ui NEEA110A NEEA112A NEEA113A NEEG107A NEEG110A NEEG111A NEEG116A NEEG118A	nits to a maximum weighting of 160 Assemble, mount and connect control gear switchgear Fabricate and assemble bus bars Mount and wire control panel equipment Select wiring systems and cables for low volt electrical installations Find and repair faults in LV d.c. electrical approximates Carry out basic repairs to electrical compone equipment Diagnose and rectify faults in traction lift systems Maintain operation of electrical mining equipments Maintain operation of electrical marine equipments Select and arrange equipment for special LV installations	and tage general caratus and ents and tems oment and oment and	Points 40 40 40 60 60 40 80 60 60 60
You UEE UEE UEE UEE UEE UEE	NEEA112A NEEA113A NEEG110A NEEG110A NEEG110A NEEG111A NEEG116A NEEG118A NEEG119A NEEG120A	nits to a maximum weighting of 160 Assemble, mount and connect control gear switchgear Fabricate and assemble bus bars Mount and wire control panel equipment Select wiring systems and cables for low volt electrical installations Find and repair faults in LV d.c. electrical approximates Carry out basic repairs to electrical compone equipment Diagnose and rectify faults in traction lift systems Maintain operation of electrical mining equipments Maintain operation of electrical marine equipments Select and arrange equipment for special LV	and tage general caratus and ents and tems oment and oment and	Points 40 40 40 40 60 60 60 60 60 60

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UEENEEG152A	Rewind single phase machines	40
UEENEEG153A	Rewind three phase low voltage induction machines	60
UEENEEG154A	Rewind LV direct current machines	60
UEENEEG157A	Conduct electrical tests on LV electrical machines	40
UEENEEG159A	Conduct mechanical tests on electrical machines and	40
	components	
UEENEEG164A	Repair and maintain mechanical components of electrical	40
	machines	
UEENEEG165A	Maintain and service traction lifts systems and equipment	40
UEENEEG166A	Install and maintain escalators, moving walks and	40
	treadways	
UEENEEG167A	Align and install traction lift equipment	20
UEENEEG171A	Install, set up and commission interval metering	20
UEENEEG181A	Provide advice on effective and energy efficient lighting	20
	products	
UEENEEG182A	Supply effective and efficient lighting products for	40
	domestic and small commercial applications	
UEENEEG183A	Provide advice on the application of energy efficient	20
	lighting for ambient and aesthetic effect	
UEENEEG189A	Install and maintain emergency lighting systems	40
UEENEEH102A	Repairs basic electronic apparatus faults by replacement	40
	of components	
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40
UEENEEH150A	Assemble and set up basic security systems	80
UEENEEI101A	Use instrumentation drawings, specification, standards and	40
	equipment manuals	
UEENEEI102A	Solve problems in pressure measurement components	40
	and systems	
UEENEEI103A	Solve problems in density/level measurement components	40
	and systems	
UEENEEI104A	Solve problems in flow measurement components and	40
	systems	
UEENEEI105A	Solve problems in temperature measurement components	40
	and systems	
UEENEEI116A	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices	
UEENEEI138A	Provide solutions to extra low voltage (ELV) electro-	60
	pneumatic control systems and drives	
UEENEEI140A	Plan the electrical installation of integrated systems	20
UEENEEI141A	Develop electrical integrated systems	20
UEENEEI150A	Develop, enter and verify discrete control programs for	60
	programmable controllers	
UEENEEJ102A	Prepare and connect refrigerant tubing and fittings	30
UEENEEJ103A	Establish the basic operating conditions of vapour	60
	compression systems	

UEENEEJ104A	Establish the basic operating conditions of air conditioning	20
UEENEEM019A	systems Attend to breakdowns in hazardous areas coal mining	20
UEENEEM020A	Attend to breakdowns in hazardous areas gas	20
OLLINLLIVIOZOA	atmospheres	20
UEENEEM021A	Attend to breakdowns in hazardous areas dust	20
OLLINELIVIOZ I/ (atmospheres	20
UEENEEM022A	Attend to breakdowns in hazardous areas pressurisation	20
UEENEEM027A	Maintain equipment in hazardous areas coal mining	60
UEENEEM028A	Maintain equipment in hazardous areas gas atmospheres	60
UEENEEM029A	Maintain equipment in hazardous areas dust atmospheres	60
UEENEEM030A	Maintain equipment in hazardous areas pressurisation	60
UEENEEM038A	Conduct testing of hazardous areas installations coal	40
OLLIVLLIVIOSOA	mining	40
UEENEEM080A	Report on the integrity of explosion-protected equipment	20
OLLIVELIVIOUS (in a hazardous area	
UETTDRIS43A	Perform low voltage field switching operation to a given	50
	schedule.	
UETTDRIS44A	Perform HV field switching operation to a given schedule	40
UETTDRIS47A	Sample, test, filter and reinstate insulating oil	40
UETTDRIS67A	Solve problems in energy supply network equipment	80
UETTDRIS68A	Solve problems in energy supply network protection	40
	equipment and systems	
UETTDRSB29A	Maintain capacitor bank equipment for voltage regulation	40
UETTDRSB39A	Perform power system substation switching operation to a	50
	given schedule	
Group C Qualification	n Elective Units	Weighting
·		Points
You may complete u	nits to a maximum weighting of 160	
UEENEEC005B		
	Estimate electrotechnology projects	40
UEENEEG125A	Estimate electrotechnology projects Plan electrical installations with a low voltage demand up	40 40
	Plan electrical installations with a low voltage demand up	
UEENEEG125A	Plan electrical installations with a low voltage demand up to 400 A per phase	40
UEENEEG125A UEENEEG128A	Plan electrical installations with a low voltage demand up to 400 A per phase Plan low voltage switchboard and control panel layouts	40
UEENEEG125A UEENEEG128A	Plan electrical installations with a low voltage demand up to 400 A per phase Plan low voltage switchboard and control panel layouts Rewind HV three phase induction machines rated for	40
UEENEEG125A UEENEEG128A UEENEEG155A	Plan electrical installations with a low voltage demand up to 400 A per phase Plan low voltage switchboard and control panel layouts Rewind HV three phase induction machines rated for voltages to 3.3 kV	40 40 60
UEENEEG125A UEENEEG128A UEENEEG155A	Plan electrical installations with a low voltage demand up to 400 A per phase Plan low voltage switchboard and control panel layouts Rewind HV three phase induction machines rated for voltages to 3.3 kV Rewind HV three phase induction machines rated for	40 40 60
UEENEEG125A UEENEEG128A UEENEEG155A UEENEEG156A	Plan electrical installations with a low voltage demand up to 400 A per phase Plan low voltage switchboard and control panel layouts Rewind HV three phase induction machines rated for voltages to 3.3 kV Rewind HV three phase induction machines rated for voltages above 3.3 kV	40 40 60 60
UEENEEG125A UEENEEG128A UEENEEG155A UEENEEG156A UEENEEG158A	Plan electrical installations with a low voltage demand up to 400 A per phase Plan low voltage switchboard and control panel layouts Rewind HV three phase induction machines rated for voltages to 3.3 kV Rewind HV three phase induction machines rated for voltages above 3.3 kV Conduct electrical tests on HV electrical machines	40 40 60 60
UEENEEG125A UEENEEG128A UEENEEG155A UEENEEG156A UEENEEG158A	Plan electrical installations with a low voltage demand up to 400 A per phase Plan low voltage switchboard and control panel layouts Rewind HV three phase induction machines rated for voltages to 3.3 kV Rewind HV three phase induction machines rated for voltages above 3.3 kV Conduct electrical tests on HV electrical machines Set up and place LV electrical apparatus and associated	40 40 60 60
UEENEEG125A UEENEEG128A UEENEEG155A UEENEEG156A UEENEEG158A UEENEEG162A	Plan electrical installations with a low voltage demand up to 400 A per phase Plan low voltage switchboard and control panel layouts Rewind HV three phase induction machines rated for voltages to 3.3 kV Rewind HV three phase induction machines rated for voltages above 3.3 kV Conduct electrical tests on HV electrical machines Set up and place LV electrical apparatus and associated circuits into service	40 40 60 60 60 40
UEENEEG125A UEENEEG128A UEENEEG155A UEENEEG156A UEENEEG158A UEENEEG162A UEENEEG168A	Plan electrical installations with a low voltage demand up to 400 A per phase Plan low voltage switchboard and control panel layouts Rewind HV three phase induction machines rated for voltages to 3.3 kV Rewind HV three phase induction machines rated for voltages above 3.3 kV Conduct electrical tests on HV electrical machines Set up and place LV electrical apparatus and associated circuits into service Diagnose and rectify faults in complex lift systems	40 40 60 60 60 40
UEENEEG125A UEENEEG128A UEENEEG155A UEENEEG156A UEENEEG158A UEENEEG162A UEENEEG162A UEENEEG172A	Plan electrical installations with a low voltage demand up to 400 A per phase Plan low voltage switchboard and control panel layouts Rewind HV three phase induction machines rated for voltages to 3.3 kV Rewind HV three phase induction machines rated for voltages above 3.3 kV Conduct electrical tests on HV electrical machines Set up and place LV electrical apparatus and associated circuits into service Diagnose and rectify faults in complex lift systems Investigate and report on electrical incidents and causes	40 40 60 60 60 40 40
UEENEEG125A UEENEEG128A UEENEEG155A UEENEEG156A UEENEEG158A UEENEEG162A UEENEEG162A UEENEEG172A	Plan electrical installations with a low voltage demand up to 400 A per phase Plan low voltage switchboard and control panel layouts Rewind HV three phase induction machines rated for voltages to 3.3 kV Rewind HV three phase induction machines rated for voltages above 3.3 kV Conduct electrical tests on HV electrical machines Set up and place LV electrical apparatus and associated circuits into service Diagnose and rectify faults in complex lift systems Investigate and report on electrical incidents and causes Develop compliance policies and plans to conduct a	40 40 60 60 60 40 40

UEENEEG185A	Select effective and efficient light sources and luminaries	60
	for given locations and designs	
UEENEEG186A	Design effective and efficient lighting for residential and	20
	commercial buildings	
UEENEEG188A	Prepare quotations for the supply of effective and efficient	20
	lighting products for lighting projects	
UEENEEI119A	Set up industrial field control devices	60
UEENEEI120A	Provide solutions to problems in industrial control systems	60
UEENEEI124A	Fault find and repair analogue circuits and components in	60
	electronic control systems	
UEENEEI125A	Provide solutions to fluid circuit operations	60
UEENEEI126A	Provide solutions to pneumatic-hydraulic system	80
	operations	
UEENEEI139A	Diagnose and rectify faults in digital controls systems	60
UEENEEI142A	Develop an electrical integrated system interface for	20
	access through a touch screen	
UEENEEI143A	Develop access control of electrical integrated systems	20
	using logic-based programming tools	
UEENEEI144A	Develop interfaces for multiple access methods to	20
	monitor, schedule and control an electrical integrated	
	system	
UEENEEI148A	Solve problems in single phase electronic power control	60
	circuits	
UEENEEI149A	Solve problems in polyphase electronic power control	60
	circuits	
UEENEEI151A	Develop, enter and verify word and analogue control	60
	programs for programmable logic controllers.	
UEENEEI152A	Develop, enter and verify programs in Supervisory Control	60
	and Data Acquisition systems	
UEENEEI155A	Develop structured programs to control external devices	40
UEENEEM039A	Conduct testing of hazardous areas installations - gas	40
	atmospheres	
UEENEEM042A	Conduct visual inspection of hazardous areas installations	40
UEENEEM044A	Conduct detailed inspection of hazardous areas	40
	installations gas atmospheres	
UEENEEM047A	Develop and manage maintenance programs for	20
	hazardous areas electrical equipment coal mining	
UEENEEM078A	Manage compliance of hazardous areas	20
Group D Qualification	n Elective Units	Weighting Points
You may complete u	nits to a maximum weighting of 160	
real trialy corribate a	<u> </u>	
UEENEEC006B	Prepare tender submissions for electrotechnology projects	60
		60
UEENEEC006B	Prepare tender submissions for electrotechnology projects	
UEENEEC006B	Prepare tender submissions for electrotechnology projects Develop and implement energy sector maintenance	

UEENEEG131A	Evaluate performance of low voltage electrical apparatus	40 60
ueeneeg180A	Develop detailed and complex drawings for electrical systems using CAD systems	00
UEENEEG187A	Design effective and efficient lighting for public, open and sports areas	20
UEENEEI127A	Analyse complex electronic circuits controlling fluids	80
UEENEEI145A	Diagnose and rectify faults in a.c. motor drive systems	60
UEENEEI146A	Diagnose and rectify faults in d.c. motor drive systems	60
JEENEEI147A	Diagnose and rectify faults in servo drive systems	60
UEENEEI156A	Develop and test code for microcontroller devices	60
UEENEEI157A	Configure and maintain industrial control system networks	60
UEENEEK129A	Design renewable energy (RE) heating systems	120
JEENEEK131A	Design wind energy conversion systems (WECS) rated to 10 kW	60
JEENEEK138A	Design micro-hydro systems rated to 6.4 kW	60
UEENEEM035A	Conduct a conformity assessment of explosion-protected equipment coal mining	40
UEENEEM036A	Conduct a conformity assessment of explosion-protected equipment gas atmospheres	40
JEENEEM037A	Conduct a conformity assessment of explosion-protected equipment dust atmospheres	40
UEENEEM054A	Plan electrical installations for hazardous areas gas atmospheres	20
UEENEEM064A	Conduct audit of hazardous areas installations coal mining	60
JEENEEM065A	Conduct audit of hazardous areas installations gas atmospheres	60
UEENEEM066A	Conduct audit of hazardous areas installations dust atmospheres	60
UEENEEM067A	Assess the fitness-for-purpose of hazardous areas explosion-protected equipment coal mining	60
UEENEEM068A	Assess the fitness-for-purpose of hazardous areas explosion-protected equipment gas atmospheres	60
UEENEEM069A	Assess the fitness-for-purpose of hazardous areas explosion-protected equipment dust atmospheres	60
UETTDRIS69A	Diagnose and rectify faults in energy supply apparatus	60
UETTDRIS70A	Diagnose and rectify faults in electrical energy distribution systems	60
UETTDRIS71A	Diagnose and rectify faults in electrical energy supply transmission systems	60
UETTDRIS72A	Diagnose and rectify faults in distributed Generation systems	60
Group E Qualificatio	on Elective Units	Weighting Points
·	units to a minimum weighting of 200 our elective units from this Group	
Tod Thay sciect all y	our elective differ from this croup	1

UEENEEC007B	Manage contract variations	40
UEENEEE127A	Use advanced computational processes to provide	80
	solutions to energy sector engineering problems	
UEENEEE128A	Develop engineering solutions to photonic system	80
	problems	
UEENEEE160A	Provide engineering solutions for uses of materials and	80
	thermodynamic effects	
UEENEEE161A	Analyse static and dynamic parameters of electrical	80
	equipment	
UEENEEE162A	Select drive components for electrical equipment design	80
UEENEEE163A	Analyse materials for suitability in electrical equipment	80
UEENEEE164A	Design electrical machine drives and production layout plans	80
UEENEEE078B	Contribute to risk management in electrotechnology systems	20
UEENEEG130A	Design switchboards rated for high fault levels (greater than 400 A)	60
UEENEEG143A	Develop engineering solution for synchronous machine and control problems	60
UEENEEG144A	Develop engineering solutions for d.c. machine and control problems	60
UEENEEG145A	Develop engineering solutions for induction machine and control problems	60
UEENEEG160A	Evaluate performance of LV electrical machines	40
UEENEEG161A	Design and develop modifications to LV electrical machines	60
UEENEEH147A	Assess electronic apparatus compliance	60
UEENEEH184A	Modify digital signal processing (DSP) based sub-systems	80
UEENEEH185A	Design signal-conditioning subsystems	80
UEENEEH188A	Design and develop electronics - computer systems projects	40
UEENEEI123A	Design electronic control systems	60
UEENEEI128A	Set up and configure controls on complex fluid systems	80
UEENEEI129A	Set up electronically controlled mechanically operated complex systems	80
UEENEEI130A	Set up electronically controlled robotically operated complex systems	80
UEENEEI153A	Design and configure Human-Machine Interface (HMI) networks	60
UEENEEI154A	Design and use advanced programming tools PC networks and HMI Interfacing	120
UEENEEK133A	Design hybrid renewable power systems	80
UEENEEK139A	Design stand-alone renewable energy (RE) systems	40
UEENEEK140A	Develop engineering solutions to renewable energy (RE) problems	60

UEENEEK146A	Design energy management controls for electrical installations in buildings	80
UEENEEK151A	Develop effective engineering strategies for energy reduction in buildings	60
UEENEEM052A	Classify hazardous areas gas atmospheres	40
UEENEEM053A	Classify hazardous areas dust atmospheres	40
UEENEEM057A	Design explosion-protected electrical systems and installations gas atmospheres	20
UEENEEM058A	Design explosion-protected electrical systems and installations dust atmospheres	20
UEENEEM059A	Design explosion-protected electrical systems and installations pressurisation	20
UEENEEM075A	Design explosion-protected electrical systems Coal mining	20
UEENEEM079A	Design of gas detection systems	20
UETTDRIS73A	Develop engineering solutions for energy supply power transformer problems	60
UETTDRIS74A	Develop engineering solutions for energy supply system protection problems	60

UEE62011 - Advanced Diploma of Engineering Technology - Renewable Energy (Release 4)

Packaging Rules

Completion requirements

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

- All the Core competency standard units, defined in the Core Competency Standard Units table below and
- A combination of Elective competency standard units to achieve a total weighting of 900 points in accordance with the Elective Competency Standard Units table below.

Core Competency St		Weighting Points
All Core competency		
UEENEED104A	Use engineering applications software on personal computers	40
UEENEEE015B	Develop design briefs for electrotechnology projects	40
UEENEEE074B	Write specifications for renewable energy engineering projects	40
UEENEEE080A	Apply industry and community standards to engineering activities	20
UEENEEE081A	Apply material science to solving electrotechnology engineering problems	60
UEENEEE082A	Apply physics to solving electrotechnology engineering problems	60
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40
UEENEEE104A	Solve problems in d.c. circuits	80
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40
UEENEEE108A	Lay wiring/cabling and terminate accessories for extra- low voltage (ELV) circuits	40
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE125A	Provide engineering solutions for problems in complex multiple path circuits	60
UEENEEE126A	Provide solutions to basic engineering computational problems	60

UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
UEENEEG149A	Provide engineering solutions to problems in complex polyphase power circuits	60
UEENEEK121A	Manage renewable energy (RE) projects	40
UEENEEK122A	Plan renewable energy (RE) projects	60
UEENEEK123A	Carry out basic repairs to renewable energy apparatus	80
UEENEEK125A	Solve basic problems in photovoltaic energy apparatus and systems	20
UEENEEK127A	Diagnose and rectify faults in renewable energy control systems	60
UEENEEK128A	Solve problems in stand-alone renewable energy systems	60
UEENEEK132A	Develop strategies to address environmental and sustainability issues in the energy sector	20
Total points in core		1260

Elective Competency Standard Units

Complete Elective units to achieve a total of weighting of 900 points from the following groups:

Group Minimum points			Maximum points	
Α	Imported and Common Elective Units		0	360
	Imported units t	from other training packages and/or state		
	accredited cour	ses can be added to this group, but they		
	must be selecte	d from qualifications where the unit is first		
	packaged at AC	QF level 6. If units have not being assigned		
	,	the relevant EE-Oz Industry Technical		
	•	nittee, their weighting will be 10 points.		
В	Qualification Ele	ective Units	0	240
C	Qualification Ele	ective Units	0	220
D	Qualification Ele	ective Units	0	220
E	Qualification Ele	ective Units	280	320
	You may select	all your elective units from this Group		
Grou	ıp A – Imported a	and Common Elective Units		Weighting
				Points
You	may complete un	its to a maximum weighting of 360		
BSBII	NM501A	Manage an information or knowledge ma	anagement	50
		system		
	NN502A	Build and sustain an innovative work envi	ronment	50
BSBN	ИGT502B	Manage people performance		70
BSBN	ИGT516C	Facilitate continuous improvement		60
BSBV	VOR502B	Ensure team effectiveness		60

UEENEEC001B	Maintain documentation	20
UEENEEC002B	Source and purchase material/parts for installation or	20
	service jobs	
UEENEEC003B	Provide quotations for installation or service jobs	20
UEENEEC010B	Deliver a service to customers	20
UEENEED101A	Use computer applications relevant to a workplace	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology	20
	apparatus	
	Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 6. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	Up to 360 points
	Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework	
Group B – Qualification	on Elective Units	Weighting Points
You may complete ur	nits to a maximum weighting of 240	
UEENEEE190A	Prepare engineering drawings using manual drafting and CAD for electrotechnology/utilities applications	60
UEENEEE191A	Prepare electrotechnology/utilities drawings using	60
	manual drafting and CAD equipment and software	
UEENEEI150A	Develop, enter and verify discrete control programs for	60
	programmable controllers	
UEENEEK107A	Conduct checks in the demand side use of remote area power supplies (RAPS)	40
UEENEEK108A	Plan periodic maintenance schedules of remote area power supplies (RAPS)	40
UEENEEK109A	Attend to breakdowns in remote area power supplies (RAPS)	20
UEENEEK117A	Maintain and repair facilities associated with remote area essential service operations	120
UEENEEK120A	Maintain operation of remote area power generation plant	120
UEENEEK124A	Solve basic problems in micro hydro systems	20
UEENEEK130A	Solve problems in wind energy conversion systems rated up to 10 kW	60
UEENEEK134A	Install ELV stand-alone photovoltaic power systems	60
UEENEEK137A	Install, set up and maintain ELV micro-hydro systems rated up to 6.4 kW	20
UEENEEK143A	Install small wind energy conversion systems rated up to	20

UEENEEK149A	Verify compliance and functionality of a extra low voltage renewable energy installation	40
UEENEEP024A	Attach cords and plugs to electrical equipment for	20
OLLIVELI OL IIV	connection to a single phase 230 Volt supply	
UEENEEP025A	Attach cords, cables and plugs to electrical equipment	20
022/ (22/ 023/ (for connection to 1000 Va.c. or 1500 Vd.c. supply	
UEENEEP026A	Conduct in-service safety testing of electrical cord	20
02211221 02011	connected equipment and cord assemblies	
Group C – Qualification		Weighting
or oup o quamicus.		Points
You may complete ur	nits to a maximum weighting of 220	
UEENEEC004B	Prepare specifications for the supply of materials and	40
	equipment for electrotechnology projects	
UEENEEC005B	Estimate electrotechnology projects	40
UEENEEE114A	Supervise and coordinate energy sector work activities	40
UEENEEE192A	Produce detailed electrotechnology /utilities drawings	60
	using computer aided design equipment and software	
UEENEEI151A	Develop, enter and verify word and analogue control	60
	programs for programmable logic controllers.	
UEENEEI152A	Develop, enter and verify programs in Supervisory	60
	Control and Data Acquisition systems	
UEENEEK110A	Coordinate maintenance of renewable energy (RE)	20
	apparatus and systems	
UEENEEK135A	Design grid connected photovoltaic power supply	60
	systems	
Group D – Qualification	on Elective Units	Weighting
		Points
You may complete ur	nits to a maximum weighting of 220	
UEENEEG180A	Develop detailed and complex drawings for electrical	60
	systems using CAD systems	
UEENEEK129A	Design renewable energy (RE) heating systems	120
UEENEEK131A	Design wind energy conversion systems (WECS) rated to	60
	10 kW	
UEENEEK138A	Design micro-hydro systems rated to 6.4 kW	60
Group E – Qualification	on Elective Units	Weighting
		Points
	nits to a minimum weighting of 280 to a maximum of 320	
UEENEEK133A	Design hybrid renewable power systems	80
UEENEEK139A	Design stand-alone renewable energy (RE) systems	40
UEENEEK140A	Develop engineering solutions to renewable energy (RE)	60
LIEFNEE!	problems	
UEENEEK146A	Design energy management controls for electrical	80
LIEEN IEELASAA	installations in buildings	60
UEENEEK151A	Develop effective engineering strategies for energy	60
	reduction in buildings	

UEE60920 - Advanced Diploma of Renewable Energy Engineering (Release 1)

Packaging Rules

A total of 1320 weighting points comprising:

980 core weighting points listed below; plus

340 general elective weighting points from the general elective units listed below.

Choose a total of 340 weighting points elective units from the list below, of which between 0 and 170 weighting points can be taken from Group A; between 0 and 60 weighting points can be taken from Group B; between 0 and 100 weighting points can be taken from Group C; between 0 and 60 weighting points can be taken from Group D; and between 160 and 340 weighting points can be taken from Group E (or all elective units of 340 weighting points can be taken from Group E).

Up to 170 weighting points of the general elective units Group A, may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided that selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points, unless directed from the Electrotechnology Industry Reference Committee (IRC).

There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

Core units		Weighting Points
UEECD0003	Apply industry and community standards to	20
	engineering activities	
UEECD0004	Apply material science to solving electrotechnology	60
	engineering problems	
UEECD0005	Apply physics to solving electrotechnology engineering	60
	problems	
UEECD0010	Compile and produce an energy sector detailed report	60
UEECD0014	Develop design briefs for electrotechnology projects	40
UEECD0017	Establish and follow a competency development plan	120
	in an electrotechnology engineering discipline	
UEECD0024	Implement and monitor energy sector WHS policies	20
	and procedures	
UEECD0026	Manage risk in electrotechnology activities	60

UEECD0036	Provide engineering solutions for problems in complex multiple path circuits	60
UEECD0039	Provide solutions to basic engineering computational problems*	60
UEECD0056	Apply methods to maintain currency of industry developments	20
UEECD0062	Write specifications for renewable energy engineering projects	40
UEECS0033	Use engineering applications software on personal computers	40
UEEEL0062	Provide engineering solutions to problems in complex polyphase power circuits*	60
UEERE0013	Develop strategies to address environmental and sustainability issues in the energy sector	20
UEERE0025	Carry out basic repairs to renewable energy (RE) apparatus*	80
UEERE0042	Manage renewable energy (RE) projects	40
UEERE0044	Plan renewable energy (RE) projects	60
UEERE0046	Solve problems in stand-alone renewable energy (RE) systems*	60
Group A: Imported	I and common elective units	Weighting Points
BSBINM501	Manage an information or knowledge management system	50
BSBINN502	Build and sustain an innovative work environment	50
BSBMGT502	Manage people performance	70
BSBMGT516	Facilitate continuous improvement	60
BSBWOR502	Lead and manage team effectiveness	60
Group B: Qualificat	tion elective units	Weighting Points
UEECD0030	Prepare electrotechnology/utilities drawings using manual drafting and CAD equipment and software*	60
UEECD0031	Prepare engineering drawings using manual drafting and CAD for electrotechnology applications*	60
UEEEC0060	Repairs basic electronic apparatus faults by replacement of components*	40
UEEEC0075	Troubleshoot single phase input d.c power supplies*	40
UEEEL0013	Install, set up and commission interval metering*	20
UEEIC0002	Assemble, enter and verify operating instructions in	20
	microprocessor equipped devices*	
UEEIC0013	Develop, enter and verify discrete control programs for programmable controllers*	60
UEERE0016	Install, configure and commission LV grid-connected photovoltaic power systems*	40
UEERE0022	Solve basic problems in photovoltaic energy apparatus and systems*	20
UEERE0034	Diagnose and rectify faults in renewable energy (RE) control systems*	60

UEERE0036 I	Install ELV stand-alone photovoltaic power systems* Install small wind energy conversion systems rated up to 10 kW for ELV stand-alone applications* Install, configure and commission LV micro-hydro	60 20
t	to 10 kW for ELV stand-alone applications*	20
	· ·	1
	systems rated up to 6.4 kW*	20
	Install, configure and commission LV wind energy conversion systems rated up to 10 kW*	40
UEERE0039 I	Install, set up and maintain ELV micro-hydro systems rated up to 6.4 kW*	20
UEERE0045	Solve basic problems in micro-hydro systems*	20
	Solve problems in wind energy conversion systems (WECS) rated up to 10 kW*	60
Group C: Qualification	on elective units	Weighting Points
	Produce detailed electrotechnology/utilities drawings using CAD equipment and software*	60
	Estimate electrotechnology projects	40
UEEEL0007 [Develop detailed electrical drawings*	60
	Carry out low voltage electrical field testing and report findings*	60
	Develop compliance policies and plans to conduct an electrical contracting business*	80
	Install and replace low voltage current transformer metering*	20
	Plan electrical installations with a low voltage demand up to 400 A per phase*	40
	Plan low voltage switchboard and control panel layouts*	40
UEEEL0071	Select low voltage power factor correction equipment*	40
UEEEL0072	Set up and place LV electrical apparatus and associated circuits into service*	40
	Develop, enter and verify programs in supervisory control and data acquisition systems*	60
	Develop, enter and verify word and analogue control programs for programmable logic controllers*	60
	Assess energy loads and uses for energy efficiency in commercial facilities*	40
	Assess energy loads and uses for energy efficiency in industrial properties and enterprises*	40
	Assess energy loads and uses for energy efficiency in residential, office and retail premises*	40
UEERE0011 [Design grid-connected photovoltaic power supply systems*	60
UEERE0014	Develop strategies to address sustainability issues for electrical installations*	20
Group D: Qualification	on elective units	Weighting Points

UEECD0013	Develop and implement energy sector maintenance	60
	programs	
UEECO0014	Prepare tender submissions for electrotechnology	60
	projects*	
UEEEL0006	Develop detailed and complex drawings for electrical	60
	systems using CAD systems*	
UEEEL0035	Design effective and efficient lighting for public, open	20
	and sports areas*	
UEEEL0037	Design electrical installations with a low voltage	40
	demand greater than 400 A per phase*	
UEEIC0010	Develop and test code for microcontroller devices	60
UEERE0029	Design micro-hydro systems rated to 6.4 kW*	60
UEERE0030	Design renewable energy (RE) heating systems*	120
UEERE0032	Design wind energy conversion systems (WECS) rated	60
	to 10 kW*	
Group E: Qualific	ation elective units	Weighting Points
UEECD0001	Analyse materials for suitability in electrical equipment*	80
UEECD0002	Analyse static and dynamic parameters of electrical	80
	equipment	
UEECD0012	Contribute to risk management in electrotechnology	20
	systems	
UEECD0029	Plan electrotechnology projects	60
UEECD0037	Provide engineering solutions for uses of materials and	80
	thermodynamic effects	
UEECD0049	Use advanced computational processes to provide	80
	solutions to energy sector engineering problems*	
UEECD0057	Manage electrotechnology projects	40
UEECO0003	Manage contract variations	40
UEEEL0038	Design switchboards rated for high fault levels (greater	60
	than 400 A)*	
UEERE0010	Design energy management controls for electrical	80
	installations in buildings*	
UEERE0012	Develop effective engineering strategies for energy	60
	reduction in buildings*	
UEERE0028	Design hybrid renewable power systems*	80
UEERE0031	Design stand-alone renewable energy (RE) systems*	40
UEERE0033	Develop engineering solutions to renewable energy	60
	(RE) problems*	

UEE62220 - Advanced Diploma of Electrical - Engineering (Release 1)

Packaging Rules

A total of 1320 weighting points comprising:

840 core weighting points listed below; plus

480 general elective weighting points from the general elective units listed below.

Choose a total of 480 weighting points elective units from the list below, of which between 0 and 220 weighting points can be taken from Group A; between 0 and 60 weighting points can be taken from Group B; between 0 and 100 weighting points can be taken from Group C; between 0 and 60 weighting points can be taken from Group D; and between 260 and 480 weighting points can be taken from Group E (or all 480 elective weighting points can be taken from Group E).

Up to 220 weighting points of the general elective units Group A , may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points, unless directed from the Electrotechnology Industry Reference Committee (IRC).

There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

Core units		Weighting Points
UEECD0003	Apply industry and community standards to	20
	engineering activities	
UEECD0004	Apply material science to solving electrotechnology	60
	engineering problems	
UEECD0005	Apply physics to solving electrotechnology	60
	engineering problems	
UEECD0010	Compile and produce an energy sector detailed report	60
UEECD0014	Develop design briefs for electrotechnology projects	40
UEECD0017	Establish and follow a competency development plan	120
	in an electrotechnology engineering discipline	
UEECD0024	Implement and monitor energy sector WHS policies	20
	and procedures	
UEECD0026	Manage risk in electrotechnology activities	60

LIFECDOOSC	Decide control of the control of	60
UEECD0036	Provide engineering solutions for problems in complex multiple path circuits	60
UEECD0039	Provide solutions to basic engineering computational problems*	60
UEECD0056	Apply methods to maintain currency of industry developments	20
UEECD0059	Write specifications for electrical engineering projects	40
UEECS0033	Use engineering applications software on personal computers	40
UEEEL0015	Manage large electrical projects*	40
UEEEL0058	Plan large electrical projects*	60
UEEEL0062	Provide engineering solutions to problems in complex polyphase power circuits*	60
UEERE0013	Develop strategies to address environmental and sustainability issues in the energy sector	20
Group A: Importe	ed and common elective units	Weighting Points
BSBINM501	Manage an information or knowledge management system	50
BSBINN502	Build and sustain an innovative work environment	50
BSBMGT502	Manage people performance	70
BSBMGT516	Facilitate continuous improvement	60
BSBWOR502	Lead and manage team effectiveness	60
Group B: General	elective units	Weighting Points
UEEAS0007	Assemble, mount and connect control gear and switchgear*	40
UEEAS0008	Fabricate and assemble bus bars*	40
UEEAS0009	Mount and wire control panel equipment*	40
UEECD0028	Plan an integrated cabling installation system*	40
UEEDV0005	Install and maintain cabling for multiple access to telecommunication services*	80
UEEDV0008	Install, modify and verify coaxial and structured communication copper cabling*	40
UEEEC0003	Assemble and set up basic security systems*	80
UEEEC0060	Repairs basic electronic apparatus faults by replacement of components*	40
UEEEC0075	Troubleshoot single phase input d.c power supplies*	40
UEEEL0004	Carry out basic repairs to electrical components and equipment*	40
UEEEL0013	Install, set up and commission interval metering*	20
UEEEL0016	Provide advice on effective and energy efficient lighting products	20
UEEEL0017	Repair and maintain mechanical components of electrical machines*	40
UEEEL0022	Supply effective and efficient lighting products for domestic and small commercial applications*	40
	domestic and small commercial applications	

UEEEL0033	Conduct electrical tests on LV electrical machines*	40
UEEEL0034	Conduct mechanical tests on electrical machines and	40
	components*	
UEEEL0045	Diagnose and rectify faults in traction lift systems*	80
UEEEL0046	Find and repair faults in LV d.c. electrical apparatus	60
	and circuits*	
UEEEL0048	Install and maintain emergency lighting systems*	40
UEEEL0049	Install and maintain emergency safety systems*	60
UEEEL0052	Maintain and service traction lift systems and	40
	equipment*	
UEEEL0053	Maintain operation of electrical marine equipment and	60
	systems*	
UEEEL0054	Maintain operation of electrical mining equipment and	60
	systems*	
UEEEL0055	Overhaul and repair major switchgear and control	60
	gear*	
UEEEL0056	Place and connect electrical coils*	40
UEEEL0061	Provide advice on the application of energy efficient	20
OLLLLOOOT	lighting for ambient and aesthetic effect*	
UEEEL0066	Rewind LV direct current machines*	60
UEEEL0067	Rewind single phase machines*	40
UEEEL0068	Rewind three phase low voltage induction machines*	60
UEEEL0069	Select and arrange equipment for special LV electrical	60
OLLLL0003	installations*	00
UEEEL0074	Wind electrical coils*	40
UEEHA0001	Conduct detailed inspection of electrical installations	40
OEEHAOOOI	for hazardous areas*	40
UEEHA0003	Determine the explosion-protection requirements to	40
OLLI IA0003	meet a specified classified hazardous area*	40
UEEHA0005	Install explosion-protected equipment and associated	60
OLLITAGOOS	apparatus and wiring systems*	00
UEEHA0006	Maintain equipment associated with hazardous areas*	60
UEEIC0002	Assemble, enter and verify operating instructions in	20
OEEIC0002	microprocessor equipped devices*	20
UEEIC0011	· · · ·	20
	Develop electrical integrated systems*	
UEEIC0013	Develop, enter and verify discrete control programs	60
1155160034	for programmable controllers*	20
UEEIC0024	Plan the electrical installation of integrated systems*	20
UEEIC0025	Provide solutions to extra-low voltage (ELV) electro-	60
LIFFICOODO	pneumatic control systems and drives*	40
UEEIC0038	Solve problems in density/level measurement	40
LIFFICOSSS	components and systems*	40
UEEIC0039	Solve problems in flow measurement components and	40
1155160044	systems*	40
UEEIC0041	Solve problems in pressure measurement components	40
	and systems*	

UEEIC0043	Solve problems in temperature measurement components and systems*	40
UEEIC0047	Use instrumentation drawings, specifications, standards and equipment manuals*	40
UEERA0035	Establish the basic operating conditions of air conditioning systems*	20
UEERA0036	Establish the basic operating conditions of vapour compression systems*	60
UEERA0059	Prepare and connect refrigerant tubing and fittings*	40
UEERE0001	Apply environmentally and sustainable procedures in the energy sector	20
UEERE0016	Install, configure and commission LV grid-connected photovoltaic power systems*	40
UEERE0022	Solve basic problems in photovoltaic energy apparatus and systems*	20
UETTDRIS44	Perform HV field switching operation to a given schedule*	40
UETTDRIS67	Solve problems in energy supply network equipment*	80
UETTDRIS68	Solve problems in energy supply network protection equipment and systems*	40
Group C: General	· · · ·	Weighting Points
UEECD0013	Develop and implement energy sector maintenance programs	60
UEECO0001	Estimate electrotechnology projects	40
UEEEL0007	Develop detailed electrical drawings*	60
UEEEL0027	Carry out low voltage electrical field testing and report findings*	60
UEEEL0029	Conduct compliance inspection of LV electrical installations with demand exceeding 100 A per phase*	40
UEEEL0030	Conduct compliance inspection of single phase LV electrical installations*	60
UEEEL0031	Conduct compliance inspection of special LV electrical installations*	60
UEEEL0032	Conduct electrical tests on HV electrical machines*	60
UEEEL0036	Design effective and efficient lighting for residential and commercial buildings*	20
UEEEL0040	Develop compliance policies and plans to conduct an electrical contracting business*	80
UEEEL0044	Diagnose and rectify faults in complex lift systems*	40
UEEEL0050	Install and replace low voltage current transformer metering*	20
UEEEL0051	Investigate and report on electrical incidents and causes*	60
UEEEL0057	Plan electrical installations with a low voltage demand up to 400 A per phase*	40

UEEEL0059	Plan low voltage switchboard and control panel layouts*	40
UEEEL0060	Prepare quotations for the supply of effective and efficient lighting products for lighting projects*	20
UEEEL0063	Provide photometric data for illumination system design	60
UEEEL0064	Rewind HV three phase induction machines rated for voltages above 3.3 kV*	60
UEEEL0065	Rewind HV three phase induction machines rated for voltages to 3.3 kV*	60
UEEEL0070	Select effective and efficient light sources and luminaries for given locations and designs*	60
UEEEL0071	Select low voltage power factor correction equipment*	40
UEEEL0072	Set up and place LV electrical apparatus and associated circuits into service*	40
UEEEL0073	Verify compliance and functionality of special LV electrical installations*	40
UEEHA0001	Conduct detailed inspection of electrical installations for hazardous areas*	40
UEEHA0002	Conduct visual and close inspection of electrical installations for hazardous areas*	40
UEEHA0003	Determine the explosion-protection requirements to meet a specified classified hazardous area*	40
UEEHA0004	Enter a classified hazardous area to undertake work related to electrical equipment	40
UEEHA0006	Maintain equipment associated with hazardous areas*	60
UEEHA0009	Develop and manage periodic electrical inspection and maintenance programs for hazardous areas*	20
UEEIC0009	Develop an electrical integrated system interface for access through a touch screen*	20
UEEIC0012	Develop structured programs to control external devices*	40
UEEIC0014	Develop, enter and verify programs in supervisory control and data acquisition systems*	60
UEEIC0015	Develop, enter and verify word and analogue control programs for programmable logic controllers*	60
UEEIC0018	Diagnose and rectify faults in digital controls systems*	60
UEEIC0020	Fault find and repair analogue circuits and components in electronic control systems*	60
UEEIC0026	Provide solutions to fluid circuit operations*	60
UEEIC0027	Provide solutions to pneumatic-hydraulic system operations*	80
UEEIC0028	Provide solutions to problems in industrial control systems*	60
UEEIC0034	Set up industrial field control devices*	60

UEEIC0040	Solve problems in polyphase electronic power control circuits*	60
UEEIC0042	Solve problems in single phase electronic power control circuits*	60
UEERE0003	Assess energy loads and uses for energy efficiency in commercial facilities*	40
UEERE0004	Assess energy loads and uses for energy efficiency in industrial properties and enterprises*	40
UEERE0005	Assess energy loads and uses for energy efficiency in residential, office and retail premises*	40
UEERE0011	Design grid-connected photovoltaic power supply systems*	60
UEERE0014	Develop strategies to address sustainability issues for electrical installations*	20
UEERE0015	Implement and monitor energy sector environmental and sustainable policies and procedures	20
Group D: General	·	Weighting Points
UEECO0014	Prepare tender submissions for electrotechnology projects*	60
UEECS0016	Develop energy sector directory services*	80
UEEEL0011	Evaluate performance of low voltage electrical apparatus*	40
UEEEL0037	Design electrical installations with a low voltage demand greater than 400 A per phase*	40
UEEHA0007	Plan electrical installations for hazardous areas*	20
UEEIC0001	Analyse complex electronic circuits controlling fluids	80
UEEIC0005	Configure and maintain industrial control system networks*	60
UEERE0012	Develop effective engineering strategies for energy reduction in buildings*	60
UETTDRIS69	Diagnose and rectify faults in energy supply apparatus*	60
UETTDRIS70	Diagnose and rectify faults in electrical energy distribution systems*	60
UETTDRIS71	Diagnose and rectify faults in electrical energy supply transmission systems*	60
UETTDRIS72	Diagnose and rectify faults in distributed generation systems*	60
Group E: General		Weighting Points
UEECD0049	Use advanced computational processes to provide solutions to energy sector engineering problems*	80
UEECO0003	Manage contract variations	40
UEECS0012	Design embedded controller control systems	80
UEECS0015	Develop energy sector computer network applications infrastructure	80

UEECS0017	Develop industrial control programs for	60
	microcomputer equipped devices	
UEECS0027	Provide programming solution for computer systems	60
	engineering problems	
UEEEL0038	Design switchboards rated for high fault levels (greater	60
	than 400 A)*	
UEEEL0043	Develop engineering solutions for induction machine	60
	and control problems*	
UEEIC0006	Design and configure human-machine interface (HMI)	60
	networks	
UEEIC0007	Design and use advanced programming tools, PC	120
	networks and HMI Interfacing	
UEEIC0010	Develop and test code for microcontroller devices	60
UEEIC0016	Diagnose and rectify faults in a.c. motor drive systems*	60
UEEIC0017	Diagnose and rectify faults in d.c. motor drive systems*	60
UEEIC0019	Diagnose and rectify faults in servo drive systems*	60
UETTDRIS73	Develop engineering solutions for energy supply	60
	power transformer problems*	
UETTDRIS74	Develop engineering solutions for energy supply	60
	system protection problems*	

UEE62120 - Advanced Diploma of Engineering Technology - Electrical (Release 1)

Packaging Rules

A total of 2160 weighting points comprising:

1460 core weighting points listed below; plus

700 general elective weighting points from the general elective units listed below.

Choose a total of 700 weighting points elective units from the list below, of which between 0 and 360 weighting points can be taken from Group A; between 0 and 160 weighting points can be taken from Group B; between 0 and 220 weighting points can be taken from Group C; between 0 and 220 weighting points can be taken from Group D; and between 200 and 720 weighting points can be taken from Group E (or all 720 elective weighting points can be taken from Group E.

Up to 360 weighting points of the general elective units Group A , may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points, unless directed from the Electrotechnology Industry Reference Committee (IRC).

There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

Core units		Weighting Points
UEECD0003	Apply industry and community standards to	20
	engineering activities	
UEECD0004	Apply material science to solving electrotechnology	60
	engineering problems	
UEECD0005	Apply physics to solving electrotechnology engineering	60
	problems	
UEECD0007	Apply work health and safety regulations, codes and	20
	practices in the workplace	
UEECD0010	Compile and produce an energy sector detailed report	60
UEECD0014	Develop design briefs for electrotechnology projects	40
UEECD0016	Document and apply measures to control WHS risks	20
	associated with electrotechnology work*	

BSBCUS201	Deliver a service to customers	20
	ed and common elective units	Weighting Points
	sustainability issues in the energy sector	Maria Danie
UEERE0013	Develop strategies to address environmental and	20
	polyphase power circuits*	
UEEEL0062	Provide engineering solutions to problems in complex	60
UEEEL0058	Plan large electrical projects*	60
UEEEL0025	Test and connect transformers*	30
	machines*	
UEEEL0024	Test and connect alternating current (a.c.) rotating	50
ULLLUUZS	voltage circuits*	40
UEEEL0023	devices* Terminate cables, cords and accessories for low	40
UEEEL0021	Solve problems in magnetic and electromagnetic	30
UEEEL0020	Solve problems in low voltage a.c. circuits*	80
UEEEL0019	Solve problems in direct current (d.c.) machines*	30
	electrical installations*	
UEEELO018	Select wiring systems and select cables for low voltage	60
UEEEL0015	Manage large electrical projects*	40
UEEEL0010	Evaluate and modify low voltage socket outlets circuits*	20
UEEEL0009	Evaluate and modify low voltage lighting circuits, equipment and controls*	20
UEEEL0008	Evaluate and modify low voltage heating equipment and controls*	20
UEEEL0003	Arrange circuits, control and protection for electrical installations*	40
	computers	
UEECS0033	Use engineering applications software on personal	40
UEECD0059	and specifications* Write specifications for electrical engineering projects	40
UEECD0051	Use drawings, diagrams, schedules, standards, codes	40
UEECD0043	Solve problems in direct current circuits*	80
UEECD0039	Provide solutions to basic engineering computational problems*	60
32200000	multiple path circuits	
UEECD0026	Provide engineering solutions for problems in complex	60
UEECD0026	Manage risk in electrotechnology activities	60
UEECD0024	Implement and monitor energy sector WHS policies and procedures	20
UEECD0020	Fix and secure electrotechnology equipment*	20
LIFECDOOO	components*	20
UEECD0019	Fabricate, assemble and dismantle utilities industry	40
	in an electrotechnology engineering discipline	
UEECD0017	Establish and follow a competency development plan	120

BSBINM501	Manage an information or knowledge management	50
	system	
BSBINN502	Build and sustain an innovative work environment	50
BSBMGT502	Manage people performance	70
BSBMGT516	Facilitate continuous improvement	60
BSBWOR502	Lead and manage team effectiveness	60
ICTICT203	Operate application software packages	20
UEECD0035	Provide basic instruction in the use of	20
	electrotechnology apparatus	
UEECO0002	Maintain documentation	20
UEECO0015	Provide quotations for installation or service jobs	20
UEECO0017	Source and purchase material/parts for installation or	20
	service jobs	
Group B: Genera	l elective units	Weighting Points
UEECD0020	Fix and secure electrotechnology equipment*	20
UEECD0028	Plan an integrated cabling installation system*	40
UEECD0030	Prepare electrotechnology/utilities drawings using	60
	manual drafting and CAD equipment and software*	
UEECD0031	Prepare engineering drawings using manual drafting	60
	and CAD for electrotechnology applications*	
UEEDV0005	Install and maintain cabling for multiple access to	80
	telecommunication services*	
UEEDV0008	Install, modify and verify coaxial and structured	40
	communication copper cabling*	
UEEEC0003	Assemble and set up basic security systems*	80
UEEEC0060	Repairs basic electronic apparatus faults by	40
	replacement of components*	
UEEEC0075	Troubleshoot single phase input d.c power supplies*	40
UEEEL0004	Carry out basic repairs to electrical components and	40
115551 0016	equipment*	20
UEEEL0016	Provide advice on effective and energy efficient lighting products	20
UEEEL0022	Supply effective and efficient lighting products for	40
OLLLLUUZZ	domestic and small commercial applications*	40
UEEEL0061	Provide advice on the application of energy efficient	20
OLLLLOOOT	lighting for ambient and aesthetic effect*	20
UEEEL0069	Select and arrange equipment for special LV electrical	60
OLLLLOOOJ	installations*	
UEEIC0002	Assemble, enter and verify operating instructions in	20
OLLICOUOZ	microprocessor equipped devices*	20
UEEIC0011	Develop electrical integrated systems*	20
UEEIC0011	Develop, enter and verify discrete control programs for	60
OLLICOOIS	programmable controllers*	
UEEIC0024	Plan the electrical installation of integrated systems*	20
UEEIC0025	Provide solutions to extra-low voltage (ELV) electro-	60
OLLICOUZJ	pneumatic control systems and drives*	
	Pricamatic control systems and unives	1

UEEIC0047	Use instrumentation drawings, specifications, standards and equipment manuals*	40
UEERE0022	Solve basic problems in photovoltaic energy apparatus and systems*	20
UETTDRIS67	Solve problems in energy supply network equipment*	80
UETTDRIS68	Solve problems in energy supply network protection	40
	equipment and systems*	
Group C: Genera		Weighting Points
UEECO0001	Estimate electrotechnology projects	40
UEEEL0007	Develop detailed electrical drawings*	60
UEEEL0036	Design effective and efficient lighting for residential	20
	and commercial buildings*	
UEEEL0057	Plan electrical installations with a low voltage demand	40
022220037	up to 400 A per phase*	
UEEEL0059	Plan low voltage switchboard and control panel	40
OLLLLOOSS	layouts*	
UEEEL0060	Prepare quotations for the supply of effective and	20
OLLLLOOOO	efficient lighting products for lighting projects*	20
UEEEL0063	Provide photometric data for illumination system	60
OLLLLOOOS	design	
UEEEL0070	Select effective and efficient light sources and	60
OLLLLOO70	luminaries for given locations and designs*	
UEEIC0009	Develop an electrical integrated system interface for	20
OLLICOOOS	access through a touch screen*	20
UEEIC0012		40
UEEICUUIZ	Develop structured programs to control external devices*	40
UEEIC0014		60
UEEICUU14	Develop, enter and verify programs in supervisory control and data acquisition systems*	00
UEEIC0015	· · · · · · · · · · · · · · · · · · ·	60
UEEICUUIS	Develop, enter and verify word and analogue control programs for programmable logic controllers*	60
UEERE0011		60
UEEREUUTI	Design grid-connected photovoltaic power supply systems*	60
Group D: Genera		Weighting Points
UEECD0013	Develop and implement energy sector maintenance	60
OLLODOOIS	programs	
UEECO0014	Prepare tender submissions for electrotechnology	60
011000014	projects*	
UEECS0016	Develop energy sector directory services*	80
UEEEL0006	Develop detailed and complex drawings for electrical	60
OLLLLOOOO	systems using CAD systems*	00
UEEELOO11	· · · · · · · · · · · · · · · · · · ·	40
OLLLLUUII	Evaluate performance of low voltage electrical	+0
LIEFELOOSE	apparatus*	20
UEEEL0035	Design effective and efficient lighting for public, open	20
LIEFEL 0007	and sports areas*	40
UEEEL0037	Design electrical installations with a low voltage	40
	demand greater than 400 A per phase*	

UEEIC0005	Configure and maintain industrial control system networks*	60
UEEIC0010	Develop and test code for microcontroller devices	60
UEEIC0016	Diagnose and rectify faults in a.c. motor drive systems*	60
UEEIC0017	Diagnose and rectify faults in d.c. motor drive systems*	60
UEEIC0019	Diagnose and rectify faults in servo drive systems*	60
UEERE0029	Design micro-hydro systems rated to 6.4 kW*	60
UEERE0030	Design renewable energy (RE) heating systems*	120
UEERE0032	Design wind energy conversion systems (WECS) rated to 10 kW*	60
UETTDRIS70	Diagnose and rectify faults in electrical energy distribution systems*	60
UETTDRIS71	Diagnose and rectify faults in electrical energy supply transmission systems*	60
UETTDRIS72	Diagnose and rectify faults in distributed generation systems*	60
Group E: General		Weighting Points
UEECD0001	Analyse materials for suitability in electrical equipment*	80
UEECD0002	Analyse static and dynamic parameters of electrical equipment	80
UEECD0012	Contribute to risk management in electrotechnology systems	20
UEECD0015	Develop engineering solutions to photonic system problems*	80
UEECD0037	Provide engineering solutions for uses of materials and thermodynamic effects	80
UEECD0049	Use advanced computational processes to provide solutions to energy sector engineering problems*	80
UEECO0003	Manage contract variations	40
UEECS0015	Develop energy sector computer network applications infrastructure	80
UEEEC0005	Assess electronic apparatus compliance	60
UEEEC0011	Design and develop electronics/computer systems projects	40
UEEEC0014	Design signal-conditioning sub-systems	80
UEEEC0045	Modify digital signal processing (DSP) based subsystems	80
UEEEL0038	Design switchboards rated for high fault levels (greater than 400 A)*	60
UEEEL0041	Develop engineering solution for synchronous machine and control problems*	60
UEEEL0042	Develop engineering solutions for d.c. machine and control problems*	60
UEEEL0043	Develop engineering solutions for induction machine and control problems*	60

UEEIC0006	Design and configure human-machine interface (HMI) networks	60
UEEIC0007	Design and use advanced programming tools, PC networks and HMI Interfacing	120
UEEIC0008	Design electronic control systems*	60
UEEIC0032	Set up electronically controlled robotically operated complex systems*	80
UEERE0010	Design energy management controls for electrical installations in buildings*	80
UEERE0012	Develop effective engineering strategies for energy reduction in buildings*	60
UEERE0028	Design hybrid renewable power systems*	80
UEERE0031	Design stand-alone renewable energy (RE) systems*	40
UEERE0033	Develop engineering solutions to renewable energy (RE) problems*	60
UETTDRIS73	Develop engineering solutions for energy supply power transformer problems*	60
UETTDRIS74	Develop engineering solutions for energy supply system protection problems*	60