Australian Government

UEE30820 Certificate III in Electrotechnology Electrician

Release 5

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Modification History

Release 5. Updated superseded elective units.

Release 4. Updated superseded units.

Release 3. Updated superseded imported units.

Release 2. Three units added to General Electives.

Release 1. This is the first release of this qualification in the UEE Electrotechnology Training Package

Qualification Description

This qualification provides individuals with the skills and knowledge to select, install, set up, test, fault find, repair and maintain electrical systems and equipment in buildings and premises. It includes Electrical Regulatory Authority Council (ERAC), or their successor's, Essential Performance Capabilities for an 'Unrestricted Electrician's license'.

The skills and knowledge described in this qualification require a licence or permit to practice in the workplace where work is carried out on electrical installations which are designed to operate at voltages greater than 50 volt (V) alternating current (a.c.) or 120 V direct current (d.c.).

Competency development activities in this qualification are subject to regulations directly related to licensing. Where a licence or permit to practice is not held, a relevant contract of training through an Australian Apprenticeship, may be required. To obtain an Unrestricted Electrician's Licence in most jurisdictions the qualification must be completed as an apprenticeship or Trades Recognition Australia (TRA) pathway. Where required for Licencing, the certification documentation issued must indicate if the qualification was completed as an apprenticeship or Trades Recognition Australia (TRA) pathway.

Entry Requirements

There are no entry requirements for this qualification.

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,

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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**
HLTAID009	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	20

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	circuits*	
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
UETDRRF004	Perform rescue from a live LV panel*	20

Group A 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

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UEECD0050	Use and maintain the integrity of a portable gas detection device*	20
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 equipment*	40
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
UEEEL0049	Install and maintain emergency safety systems*	60

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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
UEEEL0075	Inspect, test and maintain emergency alarm systems and equipment*	20
UEEEL0076	Inspect, test and maintain emergency lighting systems*	20
UEEEL0078	Install and commission whole current electricity meters*	20
UEEHA0004	Enter a classified hazardous area to undertake work related to electrical equipment	40
UEEHA0020	Conduct detailed inspection of electrical installations for hazardous areas*	40
UEEHA0022	Determine the explosion-protection requirements to meet a specified classified hazardous area*	40
UEEHA0025	Install explosion-protected equipment and	60

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	associated apparatus and wiring systems*	
UEEHA0026	Maintain equipment associated with hazardous areas *	60
UEEHA0038	Conduct visual and close inspection of electrical installations for hazardous areas*	40
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
UEEIC0015	Develop, enter and verify word and analogue control programs for programmable logic 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
UEERA0049	Install and start up single head split air conditioning and water heating heat pump systems*	70
UEERA0059	Prepare and connect refrigerant tubing and	40

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	fittings*	
UEERA0064	Recover, pressure test, evacuate, charge and leak test refrigerants - split systems*	60
UEERE0049	Apply safe work practices in the rooftop solar industry	20
UEERE0054	Conduct site survey for grid-connected photovoltaic and battery storage systems	30
UEERE0077	Install battery storage equipment power conversion equipment to grid *	30
UEERE0078	Install battery storage to power conversion equipment*	30
UEERE0080	Install photovoltaic power conversion equipment to grid *	30
UEERE0081	Install photovoltaic systems to power conversion equipment *	30
UEERS0001	Assemble and wire internal electrical rail signalling 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
UETDRIS017	Perform high voltage field switching operation to a given schedule*	40
UETDRIS018	Perform low voltage field switching operation to a given schedule*	50
UETDRIS031	Maintain insulating oil*	40
UETDRIS032	Solve problems in network equipment*	80
UETDRIS033	Solve problems in network protection*	40
UETDRSB001	Perform substation switching operations to a given schedule	50
UETDRSB007	Install and maintain substation direct current	30

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	systems*	
UETDRSB010	Maintain capacitor bank equipment*	40

Qualification Mapping Information

This qualification replaces and is not equivalent to UEE30811 Certificate III in Electrotechnology Electrician.

Links

Companion Volume Implementation Guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6

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