UEE30807

Certificate III in Electrotechnology Electrician

National Qualification Number UEE30807

Scope

This qualification provides competencies to select, install, set up, test, fault find, repair and maintain electrical systems and equipment in building and premises. It includes ERAC requirements for an 'Electrician's licence'.

Completion requirements

The requirements for awarding this qualification are that the following are successfully achieved:

- All of the Core competency standard units;
- The required number of Stream Core competency standard units;
- The required number of Elective competency standard units as prescribed in the respective Schedule; and
- All the required prerequisite competency standard units have been met as required.

Core Competency Standard Units

All Core competency standard units to be achieved

UEENEEC020B	Participate in electrical work and competency development activities
UEENEEE001B	Apply OHS practices in the workplace
UEENEEE002B	Dismantle, assemble and fabricate electrotechnology components
UEENEEE003B	Solve problems in extra-low voltage single path circuits
UEENEEE004B	Solve problems in multiple path d.c. circuits
UEENEEE005B	Fix and secure equipment
UEENEEE007B	Use drawings, diagrams, schedules and manuals
UEENEEE008B	Lay wiring and terminate accessories for extra-low voltage circuits
UEENEEE033B	Document occupational hazards and risks in electrical
UEENEEG001B	Solve problems in electromagnetic circuits
UEENEEG002B	Solve problems in single and three phase low voltage circuits
UEENEEG003B	Install wiring and accessories for low voltage circuits
UEENEEG004B	Install low voltage electrical apparatus and associated equipment
UEENEEG005B	Verify compliance and functionality of general electrical installations
UEENEEG007B	Select and arrange equipment for general electrical installations
UEENEEG008B	Find and repair faults in electrical apparatus and circuits
UEENEEG009B	Develop and connect control circuits

Stream Core Competency Standard Units

At least 2 of the following competency standard units to be achieved

UEENEEC001B	Maintain documentation
UEENEEC002B	Source and purchase material/parts for installation or service jobs
UEENEEC003B	Provide quotations for installation or service jobs

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Stream Core Competency Standard Units
At least 2 of the following competency standard units to be achieved

UEENEEC010B	Deliver a service to customers
UEENEED001B	Use basic computer applications relevant to a workplace
UEENEEE009B	Comply with scheduled and preventative maintenance program processes
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus
UEENEEK042A	Participate in environmentally sustainable work practices

Elective Competency Standard Units
In accordance with Schedule 3, which forms an integral part of this qualification, achieve a Unit Strand Total of at least 6 as specified.

Note:

1. Prerequisite pathways shall be identified and met for all elective units selected.
2. In selecting elective units considerations to career planning advice should be given to units that form part of a prerequisite pathway for the progression to achieve particular competencies or qualification at a higher level.

END OF QUALIFICATION

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Schedule of Electives – 3

Competency standard units have been put into strands to facilitate work outcomes for the qualification, as specified by industry stakeholders. This design feature has been developed to enhance flexibility for enterprise outcomes.

The following provides examples on the use of the Schedules in selecting appropriate competency standard units to complete the elective requirements of the qualification:

- 1 unit from strand 6, gives a unit strand total of 6
- 2 units from strand 3, gives a unit strand total of 6
- 1 unit from strand 5 PLUS 1 unit from strand 1, gives a unit strand total of 6

Notes:

1. All prerequisites must be met prior to completing each competency standard unit.
2. Where a competency standard unit is achieved as part of the core of a qualification it shall not be used again for selection as an elective unit.

Strand 6

Schedule 3 – Strand 6 Electives

UEENEEA010B	Assemble, mount and connect switchgear and controlgear
UEENEED012B	Support computer hardware and software
UEENEEF002B	Lay and connect cables for multiple access to telecommunication services
UEENEEF010B	Select and arrange equipment for local area networks
UEENEEG007B	Select and arrange equipment for general electrical installations
UEENEEG015B	Find and rectify faults in energy supply network equipment
UEENEEG052B	Rewind single phase induction machines
UEENEEG053B	Rewind three phase induction machines rated for low voltage
UEENEEG054B	Rewind direct current machines rated for low voltage
UEENEEH003B	Carry out routine repairs to business equipment
UEENEEH006B	Assemble and set up fixed audio/video components and systems in buildings and premises
UEENEEH010B	Install commercial audio/video system components
UEENEEH017B	Carry out repairs of predictable faults in audio and video replay/recording apparatus
UEENEEH019B	Carry out repairs of predictable faults in television receivers
UEENEEH021B	Find and repair faults in high volume office equipment
UEENEEH071B	Find and repair faults in television receivers
UEENEEH073B	Find and repair faults in professional audio reproduction components
UEENEEH074B	Find and repair faults in audio/video recording equipment
UEENEEI006B	Solve problems in process controllers, transmitters and converters
UEENEEI009B	Set up process measuring and control instruments
UEENEEJ010B	Select refrigerant pipe/tube, accessories and associated controls
UEENEEJ053B	Find and rectify faults in appliance motors and associated controls
UEENEEK017B	Maintain and repair facilities associated with remote area essential services operation
UEENEEK018B	Maintain operation of remote area water facilities

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Schedule 3 – Strand 6 Electives

UEENEEK020B	Maintain operation of remote area power plant

Strand 5

Schedule 3 – Strand 5 Electives

UEENEEH051B	Install large wired and wireless security systems
UEENEEH069B	Solve problems in electronic circuits

Strand 4

Schedule 3 – Strand 4 Electives

UEENEED002B	Assemble, set up and test personal computers
UEENEEG016B	Diagnose and rectify faults in lifts systems
UEENEEG026B	Install and maintain field power and distribution systems with a LV demand up to 200 A per phase
UEENEEH012B	Troubleshoot digital subsystems
UEENEEH013B	Troubleshoot amplifiers
UEENEEH014B	Troubleshoot frequency dependent circuits
UEENEEH020B	Find and repair faults in gaming and games equipment
UEENEEH050B	Assemble and set up basic wired and wireless security systems
UEENEEH072B	Find and repair faults in communication systems
UEENEEI013B	Select equipment for process control systems
UEENEEJ057B	Service electric heating appliances
UEENEEK019B	Maintain operation of remote area waste water facilities
UEENEEK023B	Carry out basic repairs to renewable energy apparatus by replacement of components
UEENEEK025B	Solve basic problems in photovoltaic energy apparatus
UEENEEP001B	Disconnect and reconnect fixed wired electrical equipment connected to a low voltage supply

Strand 3

Schedule 3 – Strand 3 Electives

UEENEEA012B	Make up and assemble bus bars
UEENEEA013B	Assemble and wire control panels
UEENEED007B	Develop, enter and verify programs for programmable logic controllers using ladder instruction set
UEENEED031B	Develop and validate basic integrated systems
UEENEEF008B	Select and arrange equipment for wireless networks
UEENEEF009B	Install and connect voice and data communications equipment
UEENEEF011B	Test, report and rectify faults in voice and data installations
UEENEEG010B	Find and repair faults in d.c. electrical apparatus and circuits
UEENEEG013B	Install and maintain emergency systems.
UEENEEG018B	Maintain operation of electrical mining equipment
UEENEEG019B	Maintain the operation of electrical marine equipment
UEENEEG020B	Select and arrange equipment for special electrical installations
UEENEEG029B	Overhaul and repair switchgear / controlgear
UEENEEG055B	Rewind three phase induction machines rated for high voltage to 3.3 kV

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Schedule 3 – Strand 3 Electives

UEENEEG056B	Rewind three phase induction machines rated for high voltage above 3.3 kV
UEENEEG058B	Conduct electrical tests on high voltage electrical machines
UEENEEG064B	Repair mechanical components of electrical machines
UEENEEH008B	Assemble and erect reception antennae and signal distribution equipment
UEENEEH009B	Set up and test gaming/games equipment
UEENEEH015B	Develop software solutions in microcontroller based systems
UEENEEH022B	Find and repair faults in remote control apparatus
UEENEEH027B	Commission commercial radio frequency (RF) transmission and reception systems
UEENEEH028B	Install microwave and antennae and waveguides
UEENEEH054B	Program and commission commercial security alarm systems
UEENEEH055B	Program and commission commercial security access control systems
UEENEEH056B	Program and commission commercial security closed circuit television (CCTV) systems
One unit from endorsed TP	One competency standard unit may be imported from any other National Quality Council (NQC) endorsed Training Package and be aligned to a relevant AQF
UEENEEI014B	Find and rectify faults in process control systems
UEENEEJ005B	Position, assemble and start up split air conditioning systems
UEENEEJ051B	Service small appliances and power tools
UEENEEJ054B	Find and rectify faults in appliance control devices and systems
UEENEEJ055B	Service refrigerated appliances
UEENEEJ072B	Recover, pressure and leak test, evacuate and charge refrigerants – split air conditioning systems
UEENEEM004B	Install explosion-protected equipment and wiring systems
UEENEEM006B	Maintain equipment in hazardous areas
UEENEEM007B	Overhaul and repair explosion-protected equipment
UEENEEP004B	Disconnect and reconnect explosion-protected electrical equipment connected to low voltage supply
UEENEEP005B	Disconnect and reconnect 3.3 kV electric propulsion components of self-propelled earth moving vehicles

Strand 2

Schedule 3 – Strand 2 Electives

UEENEEA001B	Assemble electronic apparatus
UEENEEA003B	Set up and check electronic component placement machines
UEENEEA004B	Rework electronic sub assemblies
UEENEEA006B	Apply lead-free soldering techniques
UEENEED004B	Use engineering applications software
UEENEED029B	Develop basic web pages for engineering applications
UEENEED030B	Select, install, configure and test multimedia devices
UEENEED043B	Install and configure a computer operating system and software
UEENEED046B	Set up and configure basic local area network
UEENEED053B	Set up and test biometric devices
UEENEEE019B	Solve problems in multiple path a.c. circuits

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Schedule 3 – Strand 2 Electives

UEENEEE021B	Plan an integrated cabling system
UEENEEF003B	Install and maintain cabling for telecommunication services in lifts
UEENEEF004B	Install and modify performance data communication structured cabling
UEENEEF005B	Install and modify performance data communication optical fibre cabling
UEENEEF007B	Set up wireless capabilities of communications and data storage devices
UEENEEF012B	Install aerial communication cables
UEENEEF013B	Install below ground communication cables
UEENEEF014B	Set up and configure basic data communications systems
UEENEEG017B	Install electrical power and control equipment for rail network signalling
UEENEEG021B	Verify compliance and functionality of special electrical installations
UEENEEG025B	Plan electrical installations with a LV demand up to 400A per phase
UEENEEG028B	Plan switchboard and control panel layouts
UEENEEG034B	Perform high voltage field switching to a given schedule
UEENEEG057B	Conduct electrical tests on low voltage electrical machines
UEENEEG059B	Conduct mechanical tests of electrical machines
UEENEEG062B	Set up and place electrical apparatus and associated circuits into service
UEENEEG065B	Maintain and service traction lifts
UEENEEG066B	Installation and maintenance of escalators, moving walks and tread ways
UEENEEG067B	Align and Install Lift Equipment
UEENEEH002B	Carry out basic repairs to electronic apparatus by replacement of components
UEENEEH004B	Set up and test audio/video equipment
UEENEEH005B	Verify compliance and functionality of custom electronic installations
UEENEEH007B	Carry out repairs of predictable faults in general electronic apparatus
UEENEEH011B	Troubleshoot d.c. power supplies with single phase input
UEENEEH016B	Find and repair faults in the microwave amplifier sections of electronic apparatus
UEENEEH018B	Find and repair faults in electronic apparatus
UEENEEH023B	Find and repair faults in microwave heating apparatus
UEENEEH024B	Carry out repairs of predictable faults in audio components
UEENEEH038B	Find and repair faults in complex power supplies
UEENEEH039B	Troubleshoot basic amplifiers
UEENEEH042B	Troubleshoot oscillators
UEENEEH046B	Solve fundamental problems in electronic communications systems
UEENEEH052B	Enter instructions and test basic wired and wireless security systems
UEENEEH063B	Enter and verify programs in preparation for commissioning fire protection systems

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Schedule 3 – Strand 2 Electives

UEENEEH064B	Commission commercial fire protection systems
UEENEEH065B	Find and repair faults in fire protection systems
UEENEEH066B	Fault find Microcontroller based hardware
UEENEEH070B	Terminate and connect components, conductors, wiring and cables for electronic circuits
UEENEEH087B	Solve problems in musical equipment circuits
UEENEEI001B	Install and set up transducers and sensing devices
UEENEEI002B	Solve problems in pressure measurement systems
UEENEEI003B	Solve problems in density/level measurement systems
UEENEEI004B	Solve problems in flow measurement systems
UEENEEI005B	Solve problems in temperature measurement systems
UEENEEI007B	Install process instrumentation and control cabling and tubing
UEENEEI008B	Install process control apparatus and associated equipment
UEENEEI010B	Set up and adjust process control loops
UEENEEI011B	Find and rectify faults in process control valve and associated equipment
UEENEEI012B	Verify compliance and functionality of process control installations
UEENEEI017B	Calibrate and test measuring instruments
UEENEEJ002B	Prepare refrigeration tubing and fittings
UEENEEJ003B	Determine the basic operating conditions of vapour compression systems
UEENEEJ004B	Determine the basic operating conditions of air conditioning systems
UEENEEJ014B	Solve problems in hydronic systems
UEENEEJ015B	Solve problems in beverage dispensers
UEENEEJ016B	Solve problems in transport refrigeration systems
UEENEEJ018B	Solve problems in post mix refrigeration systems
UEENEEJ020B	Solve problems in industrial refrigeration systems
UEENEEJ056B	Service clothes washers and dryers
UEENEEJ058B	Service dish washing machines
UEENEEJ059B	Service gas appliances
UEENEEJ060B	Service room air conditioners
UEENEEJ061B	Verify compliance and functionality of appliances
UEENEEJ073B	Service microwave ovens
UEENEEK007B	Conduct audits in the demand side use of remote area power supplies
UEENEEK008B	Plan periodic maintenance schedules of remote area power supplies
UEENEEK026B	Install and set up grid connected photovoltaic power systems
UEENEEM009B	Test installations in hazardous areas
UEPOPS234A	Perform Routine Oxyacetylene (Fuel Gas) Welding
UEPOPS235A	Perform Routine Manual Arc Welding
UEPOPS236A	Perform Manual Heating, Thermal Cutting and Gouging
ICTTC056C	Install telecomm network equipment.
UETTDRIS04A	Perform high voltage field switching operation to a given schedule

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Strand 1

Schedule 3 – Strand 1 Electives

UEENEEA002B	Select electronic components
UEENEEA005B	Conduct functional and quality tests on assembled electronic apparatus
UEENEED005B	Enter and verify operating instructions in microprocessor equipped devices
UEENEEE005B	Fix and secure equipment
UEENEEF001B	Lay and connect cabling for direct access to telecommunication services
UEENEEH001B	Carry out basic repairs to computer equipment by replacement of modules/sub-assemblies
UEENEEJ017B	Solve problems in ultra-low temperature refrigeration systems
UEENEEJ019B	Solve problems in ice making systems
UEENEEJ052B	Carry out repairs to appliance refrigeration systems
UEENEEJ066B	Solve problems in diary refrigeration systems
UEENEEJ067B	Solve problems in central air conditioning systems
UEENEEJ068B	Maintain microbial control of air and water systems
UEENEEJ071B	Solve problems in refrigerated beverage vending cabinets
UEENEEK009B	Attend to breakdowns in remote area power supplies
UEENEEK024B	Assemble and set up photovoltaic apparatus in domestic dwellings
UEENEEK037B	Install and set up micro-hydro systems
UEENEEK043A	Install small wind energy conversion systems for stand-alone applications
MCMS200A	Apply competitive manufacturing practices
MCMT220A	Apply quick changeover procedures
MCMT221A	Apply Just in Time (JIT) procedures
MCMT240A	Apply 5S procedures in a manufacturing environment
MCMT280A	Undertake root cause analysis
MCMT281A	Contribute to the application of a proactive maintenance strategy
UEENEEM002B	Attend to breakdowns in hazardous areas
UEENEEM003B	Use and maintain the integrity of portable gas detection devices
UEENEEM005B	Install and maintain integrity of fixed gas detection equipment
UEENEEM010B	Conduct close inspection of existing hazardous areas installations
UEENEEN002B	Assemble and wire internal electrical signalling equipment
UEENEEN003B	Install and maintain track circuit leads and bonds
UEENEEN004B	Perform cable tests
UEENEEN005B	Install and maintain signalling power supplies
UEENEEN008B	Maintain on-site power operated point-activating devices
UEENEEN009B	Maintain track circuits equipment
UEENEEN011B	Install and maintain power operated signalling equipment
UEENEEP007B	Locate and rectify faults in electrical low voltage equipment following prescribed procedures

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