



Australian Government

UET40521 Certificate IV in ESI - Power Systems Substations

Release 1

UET40521 Certificate IV in ESI - Power Systems Substations

Modification History

Release 1. This is the first release of this qualification in the UET Transmission, Distribution and Rail Sector Training Package Release 2.0.

Qualification Description

This qualification provides the skills and knowledge to work in power system substations in the electricity supply industry (ESI).

This qualification covers selecting, installing, setting up, testing, fault finding, repairing and maintaining electrical systems and equipment in buildings and premises. It also provides a career in installation and maintenance of substations, such as the maintenance of high voltage (HV) power system, including circuit breakers and transformers. It includes substation switching, inspection and diagnosing and rectifying faults. Options are available for skills to be obtained in high current direct current (d.c.) switchgear and equipment, installation of HV plant and equipment and/or the maintenance and commissioning of discrete protection and control systems.

It includes the Electrical Regulatory Authorities Council (ERAC) requirements for an 'Electrician's licence'. Competency development activities in this qualification are subject to regulations directly related to licensing.

The skills and knowledge described within the units in this qualification may require a licence or permit to practice in the workplace.

Additional and/or other conditions may also apply under state and territory legislative and regulatory licensing requirements which must be confirmed prior to commencing the qualification.

Entry Requirements

There are no entry requirements for this qualification

Packaging Rules

A total of **1280 weighting points** comprising:

1030 core weighting points listed below; **plus**

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

Choose a total of 250 **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 130 and 250 **weighting points** taken from Group C. You may select all your electives from this group.

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 selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in UET Transmission, Distribution and Rail Sector Training Package Companion Volume Implementation Guide, if not listed weighting points will be 10 points.

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

Core units	Weighting Points
UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
UEENEEE102A Fabricate, assemble and dismantle utilities industry components	40
└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
UEENEEE104A Solve problems in d.c. circuits	80
└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
UEENEEE105A Fix and secure electrotechnology equipment	20
└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	40
└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work	20
└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
UEENEEG006A Solve problems in single and three phase low voltage machines	80
└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
└ UEENEEE102A Fabricate, dismantle, assemble of electrotechnology components	
└ UEENEEE104A Solve problems in d.c. circuits	
└ UEENEEE105A Fix and secure electrotechnology	

	equipment	
	└ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEENEEG101A Solve problems in electromagnetic devices and related circuits	
	└ UEENEEG102A Solve problems in low voltage a.c. circuit	
	└ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits	
UEENEEG033A	Solve problems in single and three phase low voltage electrical apparatus and circuits	60
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE102A Fabricate, dismantle, assemble of electrotechnology components	
	└ UEENEEE104A Solve problems in d.c. circuits	
	└ UEENEEE105A Fix and secure electrotechnology equipment	
	└ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEENEEG101A Solve problems in electromagnetic devices and related circuits	
	└ UEENEEG102A Solve problems in low voltage a.c. circuit	
	└ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits	
UEENEEG063A	Arrange circuits, control and protection for general electrical installations	40
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE102A Fabricate, dismantle, assemble of electrotechnology components	
	└ UEENEEE104A Solve problems in d.c. circuits	
	└ UEENEEE105A Fix and secure electrotechnology equipment	
	└ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEENEEG101A Solve problems in electromagnetic	

	devices and related circuits	
	└ UEENEEG102A Solve problems in low voltage a.c. circuit	
	└ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits	
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE104A Solve problems in d.c. circuits	
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE104A Solve problems in d.c. circuits	
	└ UEENEEG101A Solve problems in electromagnetic devices and related circuits	
UEENEEG103A	Install low voltage wiring and accessories	20
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE102A Fabricate, dismantle, assemble of electrotechnology components	
	└ UEENEEE104A Solve problems in d.c. circuits	
	└ UEENEEE105A Fix and secure electrotechnology equipment	
	└ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work	
	└ UEENEEG006A Solve problems in single and three phase low voltage machines	
	└ UEENEEG033A Solve problems in single and three phase electrical apparatus and circuits	
	└ UEENEEG063A Arrange circuits, control and protection for general electrical installations	
	└ UEENEEG101A Solve problems in electromagnetic devices and related circuits	
	└ UEENEEG102A Solve problems in low voltage a.c.	

circuit

- └ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits
- └ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations
- └ UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits
- └ UEENEEG109A Develop and connect electrical control circuits

UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations 20

- └ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace
- └ UEENEEE102A Fabricate, dismantle, assemble of electrotechnology components
- └ UEENEEE104A Solve problems in d.c. circuits
- └ UEENEEE105A Fix and secure electrotechnology equipment
- └ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications
- └ UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work
- └ UEENEEG006A Solve problems in single and three phase low voltage machines
- └ UEENEEG033A Solve problems in single and three phase electrical apparatus and circuits
- └ UEENEEG063A Arrange circuits, control and protection for general electrical installations
- └ UEENEEG101A Solve problems in electromagnetic devices and related circuits
- └ UEENEEG102A Solve problems in low voltage a.c. circuit
- └ UEENEEG103A Install low voltage wiring and accessories
- └ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits
- └ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations

	└ UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	
	└ UEENEEG109A Develop and connect electrical control circuits	
UEENEEG105A	Verify compliance and functionality of low voltage general electrical installations	40
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE102A Fabricate, dismantle, assemble of electrotechnology components	
	└ UEENEEE104A Solve problems in d.c. circuits	
	└ UEENEEE105A Fix and secure electrotechnology equipment	
	└ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work	
	└ UEENEEG006A Solve problems in single and three phase low voltage machines	
	└ UEENEEG033A Solve problems in single and three phase electrical apparatus and circuits	
	└ UEENEEG063A Arrange circuits, control and protection for general electrical installations	
	└ UEENEEG101A Solve problems in electromagnetic devices and related circuits	
	└ UEENEEG102A Solve problems in low voltage a.c. circuit	
	└ UEENEEG103A Install low voltage wiring and accessories	
	└ UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations	
	└ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits	
	└ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations	
	└ UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	

└ UEENEEG109A Develop and connect electrical control circuits

Conditions: Those holding an 'Unrestricted Electrician's Licence' or equivalent issued in an Australian state or territory meet the requirements of this unit and its prerequisite requirements.

A 'licensed electrician' applying for an 'electrical contractors licence' may be required to undertake this unit to demonstrate their currency with verification of compliance requirements. In this case they are deemed to have met the prerequisites for this unit provided that: they hold a current 'electricians licence' or its equivalent issued in an Australian state or territory and have recently been in permanent employment as a licensed electrician sufficient to evidence current knowledge of applicable standards and regulations.

UEENEEG106A Terminate cables, cords and accessories for low voltage circuits 40

└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace

└ UEENEEE102A Fabricate, assemble and dismantle utilities industry components

└ UEENEEE105A Fix and secure electrotechnology equipment

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

UEENEEG107A Select wiring systems and cables for low voltage general electrical installations 60

└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace

└ UEENEEE102A Fabricate, dismantle, assemble of electrotechnology components

└ UEENEEE104A Solve problems in d.c. circuits

└ UEENEEE105A Fix and secure electrotechnology equipment

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

└ UEENEEG006A Solve problems in single and three phase low voltage machines

└ UEENEEG033A Solve problems in single and three

	phase electrical apparatus and circuits	
	└ UEENEEG063A Arrange circuits, control and protection for general electrical installations	
	└ UEENEEG101A Solve problems in electromagnetic devices and related circuits	
	└ UEENEEG102A Solve problems in low voltage a.c. circuit	
	└ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits	
UEENEEG108A	Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	40
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE102A Fabricate, dismantle, assemble of utilities components	
	└ UEENEEE104A Solve problems in d.c. circuits	
	└ UEENEEE105A Fix and secure electrotechnology equipment	
	└ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEENEEG006A Solve problems in single and three phase low voltage machines	
	└ UEENEEG033A Solve problems in single and three phase electrical apparatus and circuits	
	└ UEENEEG063A Arrange circuits, control and protection for general electrical installations	
	└ UEENEEG101A Solve problems in electromagnetic devices and related circuits	
	└ UEENEEG102A Solve problems in low voltage a.c. circuits	
	└ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits	
UEENEEG109A	Develop and connect electrical control circuits	80
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE102A Fabricate, dismantle, assemble of electrotechnology components	
	└ UEENEEE104A Solve problems in d.c. circuits	

	<ul style="list-style-type: none"> └ UEENEEE105A Fix and secure electrotechnology equipment └ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications └ UEENEEG006A Solve problems in single and three phase low voltage machines └ UEENEEG063A Arrange circuits, control and protection for general electrical installations └ UEENEEG101A Solve problems in electromagnetic devices and related circuits └ UEENEEG102A Solve problems in low voltage a.c. circuit └ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits 	
UEENEEK142A	Apply environmentally and sustainable procedures in the energy sector	20
UETDREL005	Work safely in the vicinity of live electrical apparatus <ul style="list-style-type: none"> └ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace 	20
UETDRIS005	Implement & monitor power system environmental & sustainable energy management policies & procedures <ul style="list-style-type: none"> Electrotechnology Pathway Unit Group └ UEENEEK142A Apply environmentally and sustainable procedures in the energy sector ESI - TDR Pathway Unit Group └ UETDREL001 Apply environmental requirements 	30
UETDRIS006	Implement and monitor the power system organisational WHS/OHS policies, procedures and programs <ul style="list-style-type: none"> └ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace └ UETDREL005 Work safely in the vicinity of live electrical apparatus 	30
UETTDRSB22	Carry out power systems substation inspection <ul style="list-style-type: none"> Common Unit Group └ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace └ UEENEEE102A Fabricate, assemble and dismantle 	60

utilities industry components

- └ UEENEEE104A Solve problems in d.c. circuits
- └ UEENEEE105A Fix and secure electrotechnology equipment
- └ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications
- └ UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work
- └ UEENEEG006A Solve problems in single and three phase low voltage machines
- └ UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits
- └ UEENEEG063A Arrange circuits, control and protection for general electrical installations
- └ UEENEEG101A Solve problems in electromagnetic devices and related circuits
- └ UEENEEG102A Solve problems in low voltage a.c. circuits
- └ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits
- └ UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits
- └ UEENEEG109A Develop and connect electrical control circuits
- └ UEENEEK142A Apply environmentally and sustainable procedures in the energy sector

Pathway 1 - Electrician

- └ UEENEEG103A Install low voltage wiring and accessories
- └ UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations
- └ UEENEEG105A Verify compliance and functionality of low voltage general electrical installations
- └ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations

Pathway 2 - Electrical Fitter

- └ UEENEEG199A Conduct compliance and functional

verification of electrical apparatus and existing circuits

UETTDRSB23	Install and maintain substation direct current systems	30
Common Unit Group		
└ UEEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace		
└ UEEENEEE102A Fabricate, assemble and dismantle utilities industry components		
└ UEEENEEE104A Solve problems in d.c. circuits		
└ UEEENEEE105A Fix and secure electrotechnology equipment		
└ UEEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications		
└ UEEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work		
└ UEEENEEG006A Solve problems in single and three phase low voltage machines		
└ UEEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits		
└ UEEENEEG063A Arrange circuits, control and protection for general electrical installations		
└ UEEENEEG101A Solve problems in electromagnetic devices and related circuits		
└ UEEENEEG102A Solve problems in low voltage a.c. circuits		
└ UEEENEEG103A Install low voltage wiring and accessories		
└ UEEENEEG106A Terminate cables, cords and accessories for low voltage circuits		
└ UEEENEEG107A Select wiring systems and cables for low voltage general electrical installations		
└ UEEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits		
└ UEEENEEG109A Develop and connect electrical control circuits		
└ UEEENEK142A Apply environmentally and sustainable procedures in the energy sector		

Group A: Imported and common elective units		Weighting Points
BSBINS402	Coordinate workplace information systems	40
BSBLDR413	Lead effective workplace relationships	50
BSBLDR414	Lead team effectiveness	50
BSBOPS402	Coordinate business operational plans	40
BSBSTR402	Implement continuous improvement	40
Group B: Qualification elective units		Weighting Points
UETDRIS019	Sample, test, filter and reinstate insulating oil	40
	└ UEEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEEENEEE102A Fabricate, assemble and dismantle utilities industry components	
	└ UEEENEEE104A Solve problems in d.c. circuits	
	└ UEEENEEE105A Fix and secure electrotechnology equipment	
	└ UEEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work	
	└ UEEENEEG006A Solve problems in single and three phase low voltage machines	
	└ UEEENEEG101A Solve problems in electromagnetic devices and related circuits	
	└ UEEENEEG102A Solve problems in low voltage a.c. circuits	
	└ UEEENEEG106A Terminate cables, cords and accessories for low voltage circuits	
	└ UEEENEK142A Apply environmentally and sustainable procedures in the energy sector	
	└ UETDREL005 Work safely in the vicinity of live electrical apparatus	
UETDRSB001	Perform substation switching operations to a given	50

schedule

UETTDRIS67	Solve problems in energy supply network equipment Common Unit Group └ UEEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace └ UEEENEEE102A Fabricate, assemble and dismantle utilities industry components └ UEEENEEE104A Solve problems in d.c. circuits └ UEEENEEE105A Fix and secure electrotechnology equipment └ UEEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications └ UEEENEEG101A Solve problems in electromagnetic devices and related circuits └ UEEENEEG102A Solve problems in low voltage a.c. circuits └ UEEENEEG006A Solve problems in single and three phase low voltage machines └ UEEENEEG106A Terminate cables, cords and accessories for low voltage circuits	80
UETTDRIS68	Solve problems in energy supply network protection equipment and systems Common Unit Group └ UEEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace └ UEEENEEE102A Fabricate, assemble and dismantle utilities industry components └ UEEENEEE104A Solve problems in d.c. circuits └ UEEENEEE105A Fix and secure electrotechnology equipment └ UEEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications └ UEEENEEG101A Solve problems in electromagnetic devices and related circuits └ UEEENEEG102A Solve problems in low voltage a.c. circuits └ UEEENEEG006A Solve problems in single and three	40

	phase low voltage machines	
	└ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits	
	└ UETTDRIS67 Solve problems in energy supply network equipment	
UETTDRSB29	Maintain capacitor bank equipment for voltage regulation	40
	Common Unit Group	
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE102A Fabricate, assemble and dismantle utilities industry components	
	└ UEENEEE104A Solve problems in d.c. circuits	
	└ UEENEEE105A Fix and secure electrotechnology equipment	
	└ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work	
	└ UEENEEG006A Solve problems in single and three phase low voltage machines	
	└ UEENEEG101A Solve problems in electromagnetic devices and related circuits	
	└ UEENEEG102A Solve problems in low voltage a.c. circuits	
	└ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits	
	└ UEENEEK142A Apply environmentally and sustainable procedures in the energy sector	
UETTDRSB33	Install high voltage plant and equipment	50
	Common Unit Group	
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE102A Fabricate, assemble and dismantle utilities industry components	
	└ UEENEEE104A Solve problems in d.c. circuits	
	└ UEENEEE105A Fix and secure electrotechnology	

equipment

- └ UEEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications
- └ UEEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work
- └ UEEENEEG006A Solve problems in single and three phase low voltage machines
- └ UEEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits
- └ UEEENEEG063A Arrange circuits, control and protection for general electrical installations
- └ UEEENEEG101A Solve problems in electromagnetic devices and related circuits
- └ UEEENEEG102A Solve problems in low voltage a.c. circuits
- └ UEEENEEG103A Install low voltage wiring and accessories
- └ UEEENEEG106A Terminate cables, cords and accessories for low voltage circuits
- └ UEEENEEG107A Select wiring systems and cables for low voltage general electrical installations
- └ UEEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits
- └ UEEENEEG109A Develop and connect electrical control circuits
- └ UEEENEK142A Apply environmentally and sustainable procedures in the energy sector

Group C: Qualification elective units	Weighting Points
UETTDRSB21 Diagnose and rectify faults in substation environment Common Unit Group └ UEEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace └ UEEENEEE102A Fabricate, assemble and dismantle utilities industry components └ UEEENEEE104A Solve problems in d.c. circuits └ UEEENEEE105A Fix and secure electrotechnology equipment	40

- └ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications
- └ UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work
- └ UEENEEG006A Solve problems in single and three phase low voltage machines
- └ UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits
- └ UEENEEG063A Arrange circuits, control and protection for general electrical installations
- └ UEENEEG101A Solve problems in electromagnetic devices and related circuits
- └ UEENEEG102A Solve problems in low voltage a.c. circuits
- └ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits
- └ UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits
- └ UEENEEG109A Develop and connect electrical control circuits
- └ UEENEEK142A Apply environmentally and sustainable procedures in the energy sector

Pathway 1 - Electrician

- └ UEENEEG103A Install low voltage wiring and accessories
- └ UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations
- └ UEENEEG105A Verify compliance and functionality of low voltage general electrical installations
- └ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations

Pathway 2 - Electrical Fitter

- └ UEENEEG199A Conduct compliance and functional verification of electrical apparatus and existing circuits

UETTDRSB24	Maintain high voltage power system circuit breakers	60
Common Unit Group		
	└ UEENEEE101A Apply Occupational Health and	

Safety regulations, codes and practices in the workplace

- └ UEENEEE102A Fabricate, assemble and dismantle utilities industry components
- └ UEENEEE104A Solve problems in d.c. circuits
- └ UEENEEE105A Fix and secure electrotechnology equipment
- └ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications
- └ UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work
- └ UEENEEG006A Solve problems in single and three phase low voltage machines
- └ UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits
- └ UEENEEG063A Arrange circuits, control and protection for general electrical installations
- └ UEENEEG101A Solve problems in electromagnetic devices and related circuits
- └ UEENEEG102A Solve problems in low voltage a.c. circuits
- └ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits
- └ UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits
- └ UEENEEG109A Develop and connect electrical control circuits
- └ UEENEEK142A Apply environmentally and sustainable procedures in the energy sector

Pathway 1 - Electrician

- └ UEENEEG103A Install low voltage wiring and accessories
- └ UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations
- └ UEENEEG105A Verify compliance and functionality of low voltage general electrical installations
- └ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations

	Pathway 2 - Electrical Fitter	
	└ UEENEEG199A Conduct compliance and functional verification of electrical apparatus and existing circuits	
UETTDRSB25	Maintain high voltage power and instrument transformers	80
	Common Unit Group	
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE102A Fabricate, assemble and dismantle utilities industry components	
	└ UEENEEE104A Solve problems in d.c. circuits	
	└ UEENEEE105A Fix and secure electrotechnology equipment	
	└ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work	
	└ UEENEEG006A Solve problems in single and three phase low voltage machines	
	└ UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits	
	└ UEENEEG063A Arrange circuits, control and protection for general electrical installations	
	└ UEENEEG101A Solve problems in electromagnetic devices and related circuits	
	└ UEENEEG102A Solve problems in low voltage a.c. circuits	
	└ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits	
	└ UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	
	└ UEENEEG109A Develop and connect electrical control circuits	
	└ UEENEEK142A Apply environmentally and sustainable procedures in the energy sector	
	Pathway 1 - Electrician	
	└ UEENEEG103A Install low voltage wiring and accessories	

	└ UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations	
	└ UEENEEG105A Verify compliance and functionality of low voltage general electrical installations	
	└ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations	
	Pathway 2 - Electrical Fitter	
	└ UEENEEG199A Conduct compliance and functional verification of electrical apparatus and existing circuits	
UETTDRSB26	Install high current d.c. equipment and switchgear	40
	Common Unit Group	
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE102A Fabricate, assemble and dismantle utilities industry components	
	└ UEENEEE104A Solve problems in d.c. circuits	
	└ UEENEEE105A Fix and secure electrotechnology equipment	
	└ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work	
	└ UEENEEG006A Solve problems in single and three phase low voltage machines	
	└ UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits	
	└ UEENEEG063A Arrange circuits, control and protection for general electrical installations	
	└ UEENEEG101A Solve problems in electromagnetic devices and related circuits	
	└ UEENEEG102A Solve problems in low voltage a.c. circuits	
	└ UEENEEG103A Install low voltage wiring and accessories	
	└ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits	
	└ UEENEEG107A Select wiring systems and cables for	

	low voltage general electrical installations	
	└ UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	
	└ UEENEEG109A Develop and connect electrical control circuits	
	└ UEENEK142A Apply environmentally and sustainable procedures in the energy sector	
UETTDRSB27	Maintain high current d.c. equipment and switchgear	40
	Common Unit Group	
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE102A Fabricate, assemble and dismantle utilities industry components	
	└ UEENEEE104A Solve problems in d.c. circuits	
	└ UEENEEE105A Fix and secure electrotechnology equipment	
	└ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work	
	└ UEENEEG006A Solve problems in single and three phase low voltage machines	
	└ UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits	
	└ UEENEEG063A Arrange circuits, control and protection for general electrical installations	
	└ UEENEEG101A Solve problems in electromagnetic devices and related circuits	
	└ UEENEEG102A Solve problems in low voltage a.c. circuits	
	└ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits	
	└ UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	
	└ UEENEEG109A Develop and connect electrical control circuits	
	└ UEENEK142A Apply environmentally and sustainable procedures in the energy sector	

Pathway 1 - Electrician

- └ UEENEEG103A Install low voltage wiring and accessories
- └ UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations
- └ UEENEEG105A Verify compliance and functionality of low voltage general electrical installations
- └ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations

Pathway 2 - Electrical Fitter

- └ UEENEEG199A Conduct compliance and functional verification of electrical apparatus and existing circuits

UETTDRSB30	Maintain high voltage power system static VAR compensators (SVC)	30
Common Unit Group		
└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace		
└ UEENEEE102A Fabricate, assemble and dismantle utilities industry components		
└ UEENEEE104A Solve problems in d.c. circuits		
└ UEENEEE105A Fix and secure electrotechnology equipment		
└ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications		
└ UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work		
└ UEENEEG006A Solve problems in single and three phase low voltage machines		
└ UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits		
└ UEENEEG063A Arrange circuits, control and protection for general electrical installations		
└ UEENEEG101A Solve problems in electromagnetic devices and related circuits		
└ UEENEEG102A Solve problems in low voltage a.c. circuits		
└ UEENEEG106A Terminate cables, cords and		

accessories for low voltage circuits

- └ UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits
- └ UEENEEG109A Develop and connect electrical control circuits
- └ UEENEEK142A Apply environmentally and sustainable procedures in the energy sector
- └ UETTDRSB25 Maintain high voltage power and instrument transformers
- └ UETTDRSB29 Maintain capacitor bank equipment for voltage regulation

Pathway 1 - Electrician

- └ UEENEEG103A Install low voltage wiring and accessories
- └ UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations
- └ UEENEEG105A Verify compliance and functionality of low voltage general electrical installations
- └ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations

Pathway 2 - Electrical Fitter

- └ UEENEEG199A Conduct compliance and functional verification of electrical apparatus and existing circuits

UETTDRSB31	Maintain high voltage power system synchronous condensers	50
	Common Unit Group	
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE102A Fabricate, assemble and dismantle utilities industry components	
	└ UEENEEE104A Solve problems in d.c. circuits	
	└ UEENEEE105A Fix and secure electrotechnology equipment	
	└ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work	

- └ UEENEEG006A Solve problems in single and three phase low voltage machines
- └ UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits
- └ UEENEEG063A Arrange circuits, control and protection for general electrical installations
- └ UEENEEG101A Solve problems in electromagnetic devices and related circuits
- └ UEENEEG102A Solve problems in low voltage a.c. circuits
- └ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits
- └ UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits
- └ UEENEEG109A Develop and connect electrical control circuits
- └ UEENEEK142A Apply environmentally and sustainable procedures in the energy sector

Pathway 1 - Electrician

- └ UEENEEG103A Install low voltage wiring and accessories
- └ UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations
- └ UEENEEG105A Verify compliance and functionality of low voltage general electrical installations
- └ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations

Pathway 2 - Electrical Fitter

- └ UEENEEG199A Conduct compliance and functional verification of electrical apparatus and existing circuits

UETTDRSB32	Maintain power transformer on load tap changers (OLTC)	80
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Common Unit Group

- └ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace
- └ UEENEEE102A Fabricate, assemble and dismantle utilities industry components
- └ UEENEEE104A Solve problems in d.c. circuits

- └ UEENEEE105A Fix and secure electrotechnology equipment
- └ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications
- └ UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work
- └ UEENEEG006A Solve problems in single and three phase low voltage machines
- └ UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits
- └ UEENEEG063A Arrange circuits, control and protection for general electrical installations
- └ UEENEEG101A Solve problems in electromagnetic devices and related circuits
- └ UEENEEG102A Solve problems in low voltage a.c. circuits
- └ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits
- └ UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits
- └ UEENEEG109A Develop and connect electrical control circuits
- └ UEENEEK142A Apply environmentally and sustainable procedures in the energy sector
- └ UETTDRSB25 Maintain high voltage power and instrument transformers

Pathway 1 - Electrician

- └ UEENEEG103A Install low voltage wiring and accessories
- └ UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations
- └ UEENEEG105A Verify compliance and functionality of low voltage general electrical installations
- └ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations

Pathway 2 - Electrical Fitter

- └ UEENEEG199A Conduct compliance and functional

verification of electrical apparatus and existing circuits

UETTDRSB34	Carry out surveys using thermovision techniques	30
Common Unit Group		
└ UEEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace		
└ UEEENEEE102A Fabricate, assemble and dismantle utilities industry components		
└ UEEENEEE104A Solve problems in d.c. circuits		
└ UEEENEEE105A Fix and secure electrotechnology equipment		
└ UEEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications		
└ UEEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work		
└ UEEENEEG006A Solve problems in single and three phase low voltage machines		
└ UEEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits		
└ UEEENEEG063A Arrange circuits, control and protection for general electrical installations		
└ UEEENEEG101A Solve problems in electromagnetic devices and related circuits		
└ UEEENEEG102A Solve problems in low voltage a.c. circuits		
└ UEEENEEG106A Terminate cables, cords and accessories for low voltage circuits		
└ UEEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits		
└ UEEENEEG109A Develop and connect electrical control circuits		
└ UEEENEK142A Apply environmentally and sustainable procedures in the energy sector		
Pathway 1 - Electrician		
└ UEEENEEG103A Install low voltage wiring and accessories		
└ UEEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical		

	installations	
	└ UEENEEG105A Verify compliance and functionality of low voltage general electrical installations	
	└ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations	
	Pathway 2 - Electrical Fitter	
	└ UEENEEG199A Conduct compliance and functional verification of electrical apparatus and existing circuits	
UETTDRSB35	Maintain discrete control and protection systems	80
	Common Unit Group	
	└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	└ UEENEEE102A Fabricate, assemble and dismantle utilities industry components	
	└ UEENEEE104A Solve problems in d.c. circuits	
	└ UEENEEE105A Fix and secure electrotechnology equipment	
	└ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications	
	└ UEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work	
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	└ UEENEEG102A Solve problems in low voltage a.c. circuits	
	└ UEENEEG106A Terminate cables, cords and accessories for low voltage circuits	
	└ UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits	
	└ UEENEEG109A Develop and connect electrical control circuits	
	└ UEENEEK142A Apply environmentally and	

sustainable procedures in the energy sector

Pathway 1 - Electrician

- └ UEENEEG103A Install low voltage wiring and accessories
- └ UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations
- └ UEENEEG105A Verify compliance and functionality of low voltage general electrical installations
- └ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations

Pathway 2 - Electrical Fitter

- └ UEENEEG199A Conduct compliance and functional verification of electrical apparatus and existing circuits

UETTDRSB36 Commission discrete control and protection systems 30

Common Unit Group

- └ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace
- └ UEENEEE102A Fabricate, assemble and dismantle utilities industry components
- └ UEENEEE104A Solve problems in d.c. circuits
- └ UEENEEE105A Fix and secure electrotechnology equipment
- └ UEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications
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- └ UEENEEG101A Solve problems in electromagnetic devices and related circuits
- └ UEENEEG102A Solve problems in low voltage a.c. circuits
- └ UEENEEG106A Terminate cables, cords and

accessories for low voltage circuits

└ UEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits

└ UEENEEG109A Develop and connect electrical control circuits

└ UEENEEK142A Apply environmentally and sustainable procedures in the energy sector

└ UETTDRSB25 Maintain high voltage power and instrument transformers

└ UETTDRSB29 Maintain capacitor bank equipment for voltage regulation

Pathway 1 - Electrician

└ UEENEEG103A Install low voltage wiring and accessories

└ UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations

└ UEENEEG105A Verify compliance and functionality of low voltage general electrical installations

└ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations

Pathway 2 - Electrical Fitter

└ UEENEEG199A Conduct compliance and functional verification of electrical apparatus and existing circuits

UETTDRSB37 Maintain power system distribution field devices 80

Common Unit Group

└ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace

└ UEENEEE102A Fabricate, assemble and dismantle utilities industry components

└ UEENEEE104A Solve problems in d.c. circuits

└ UEENEEE105A Fix and secure electrotechnology equipment

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

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

└ UEENEEG006A Solve problems in single and three

phase low voltage machines

- └ UEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits
- └ UEENEEG063A Arrange circuits, control and protection for general electrical installations
- └ UEENEEG101A Solve problems in electromagnetic devices and related circuits
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Pathway 1 - Electrician

- └ UEENEEG103A Install low voltage wiring and accessories
- └ UEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations
- └ UEENEEG105A Verify compliance and functionality of low voltage general electrical installations
- └ UEENEEG107A Select wiring systems and cables for low voltage general electrical installations

Pathway 2 - Electrical Fitter

- └ UEENEEG199A Conduct compliance and functional verification of electrical apparatus and existing circuits

UETTDRSB38 Commission power system distribution field devices 30

Common Unit Group

- └ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace
- └ UEENEEE102A Fabricate, assemble and dismantle utilities industry components
- └ UEENEEE104A Solve problems in d.c. circuits
- └ UEENEEE105A Fix and secure electrotechnology

equipment

- └ UEEENEEE107A Use drawings, diagrams, schedules, standards, codes and specifications
- └ UEEENEEE137A Document and apply measures to control OHS risks associated with electrotechnology work
- └ UEEENEEG006A Solve problems in single and three phase low voltage machines
- └ UEEENEEG033A Solve problems in single and three phase low voltage electrical apparatus and circuits
- └ UEEENEEG063A Arrange circuits, control and protection for general electrical installations
- └ UEEENEEG101A Solve problems in electromagnetic devices and related circuits
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- └ UEEENEEG106A Terminate cables, cords and accessories for low voltage circuits
- └ UEEENEEG108A Trouble-shoot and repair faults in low voltage electrical apparatus and circuits
- └ UEEENEEG109A Develop and connect electrical control circuits
- └ UEEENEK142A Apply environmentally and sustainable procedures in the energy sector
- └ UETTDRSB37 Maintain power system distribution field devices

Pathway 1 - Electrician

- └ UEEENEEG103A Install low voltage wiring and accessories
- └ UEEENEEG104A Install appliances, switchgear and associated accessories for low voltage electrical installations
- └ UEEENEEG105A Verify compliance and functionality of low voltage general electrical installations
- └ UEEENEEG107A Select wiring systems and cables for low voltage general electrical installations

Pathway 2 - Electrical Fitter

- └ UEEENEEG199A Conduct compliance and functional verification of electrical apparatus and existing circuits

Qualification Mapping Information

This qualification replaces and is equivalent to UET40519 Certificate IV in ESI - Power Systems Substations

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7>