

UEP40322 Certificate IV in ESI Generation Maintenance - Electrical Electronics

Release 1

UEP40322 Certificate IV in ESI Generation Maintenance - Electrical Electronics

Modification History

Release 1. This is the first release of this qualification in the UEP Electricity Supply Industry - Generation Sector Training Package.

Qualification Description

This qualification covers the skills and knowledge required to manufacture, fit, assemble, erect, operate, test, find and diagnose faults, and alter and repair electrical and electronic equipment including instrumentation systems. It does not include installation of any electrical wiring systems within an electrical installation as prescribed in current industry standards.

Functions include maintenance planning and scheduling as well as electrical wiring work if it is associated with assembling, maintaining, terminating or altering the wiring between electrical components within power generating plant or machinery. It also includes the supervision of others and the coordination of work activities.

Electrical equipment means any appliance, article, accessory, wire, fitting, cable, conduit or apparatus that generates, uses, conveys or controls, or that is intended to generate, use, convey or control, electricity above extra-low voltage (ELV).

No licensing, legislative or certification requirements apply to this qualification at the time of publication.

Entry Requirements

There are no entry requirements for this qualification.

Packaging Rules

A total 1280 weighting points comprising:

- 820 core weighting points; plus
- 460 elective weighting points from the general elective units listed below.

Choose a total of 460 weighting points from the elective units list below of which:

- between 0 and 220 weighting points can be taken from Group A
- a total of 220 weighting points can be selected from Group B
- between 240 and 460 weighting points may be taken from Group C, you may select all your elective units from this group.

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

Approved Page 2 of 19

accredited course, provided that selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in UEP Electricity Supply Industry - Generation Sector Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points unless directed from the ESI Generation 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 that all prerequisite units specified are complied with.

Where a prerequisite unit is attached to a unit, it is identified by this symbol ∟.

Core units		Weighting points
UEECD0007	Apply work health and safety regulations, codes and practices in the workplace	20
UEECD0019	Fabricate, assemble and dismantle utilities industry components	40
	∟UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
UEECD0043	Solve problems in direct current circuits	80
	$\hfill \ensuremath{\square}$ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
UEECD0020	Fix and secure electrotechnology equipment	20
	$\hfill \hfill $	
UEECD0051	Use drawings, diagrams, schedules, standards, codes and specifications	40
	$\hfill \sqcup$ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
UEECD0024	Implement and monitor energy sector WHS policies and procedures	20
UEECD0016	Document and apply measures to control WHS risks associated with electrotechnology work	20
	$\hfill \hfill $	
UEEEL0024	Test and connect alternating current (a.c.) rotating machines	80
	\bot UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	

Approved Page 3 of 19

	∟ UEEEL0019 Solve problems in direct current (d.c.) machines	
	∟ UEEEL0020 Solve problems in low voltage a.c. circuits	
	∟ UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	∟ UEEEL0023 Terminate cables, cords and accessories for low voltage circuits	
UEEEL0011	Evaluate performance of low voltage electrical apparatus	60
UEEEL0003	Arrange circuits, control and protection for electrical installations	40
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟ UEECD0043 Solve problems in direct current circuits	
	∟ UEEEL0020 Solve problems in low voltage a.c. circuits	
	∟ UEEEL0023 Terminate cables, cords and accessories for low voltage circuits	
UEEEL0021	Solve problems in magnetic and electromagnetic devices LUEECD0007 Apply work health and safety regulations, codes and practices in the workplace	60
	∟UEECD0043 Solve problems in direct current circuits	
UEEEL0020	Solve problems in low voltage a.c. circuits	80
	∟ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	∟UEECD0043 Solve problems in direct current circuits	
	∟ UEEEL0021 Solve problems in magnetic and electromagnetic	

Approved Page 4 of 19

devices

UEEEL0023	Terminate cables, cords and accessories for low voltage circuits	40
	∟UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟ UEECD0020 Fix and secure electrotechnology equipment	
	∟UEECD0043 Solve problems in direct current circuits ∟ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
UEEEL0014	Isolate, test and troubleshoot low voltage electrical circuits	40
	∟ UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟ UEECD0020 Fix and secure electrotechnology equipment	
	∟ UEECD0043 Solve problems in direct current circuits	
	$\hfill \hfill $	
	∟ UEEEL0003 Arrange circuits, control and protection for general electrical installations	
	∟ UEEEL0011 Evaluate performance of low voltage electrical apparatus	
	∟ UEEEL0020 Solve problems in low voltage a.c. circuits	
	∟ UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	∟ UEEEL0023 Terminate cables, cords and accessories for low voltage circuits ∟ UEEEL0025 Test and Connect Transformers	
UEEEL0005	Develop and connect electrical control circuits	80
	∟UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟ UEECD0020 Fix and secure electrotechnology equipment	

Approved Page 5 of 19

	∟ UEECD0043 Solve problems in direct current circuits	
	$\hfill \hfill $	
	∟ UEEEL0003 Arrange circuits, control and protection for general electrical installations	
	∟ UEEEL0019 Solve problems in direct current (d.c.) machines	
	∟ UEEEL0020 Solve problems in low voltage a.c. circuits	
	∟ UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	$\hfill \hfill $	
	∟ UEEEL0024 Test and connect alternating current (a.c.) rotating machines	
	∟UEEEL0025 Test and connect transformers	
UEPOPS004	Carry out operational checks on in-service electrical plant	40
UEPOPS021	Control permit to work operations	20
UEPOPS041	Facilitate workplace communication	20
UEPOPS061	Monitor and implement environmental site plans and procedures	20
Group A Elect	ive units	Weighting points
UEECO0002	Maintain documentation	20
BSBOPS203	Deliver a service to customers	20
ICTICT215	Operate a digital media technology package	20
UEECS0033	Use engineering applications software on personal computers	40
UEECD0010	Compile and produce an energy sector detailed report	60
BSBOPS404	Implement customer service strategies	40
BSBINS402	Coordinate workplace information systems	40
BSBSTR401	Promote innovation in team environments	40

Approved Page 6 of 19

BSBHRM413	Support the learning and development of teams and individuals	40
BSBOPS402	Coordinate business operational plans	40
BSBSTR402	Implement continuous improvement	40
BSBLDR413	Lead effective workplace relationships	50
BSBLDR414	Lead team effectiveness	50
BSBPEF402	Develop personal work priorities	40
TAEDEL301	Provide work skill instruction	40
Group B Elect	tive units	Weighting points
UEEDV0005	Install and maintain cabling for multiple access to telecommunication services	120
	∟UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟UEECD0020 Fix and secure electrotechnology equipment	
	∟UEECD0043 Solve problems in direct current circuits	
	∟UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
UEEDV0006	Install and modify optical fibre performance data communication cabling	40
	∟UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟UEECD0020 Fix and secure electrotechnology equipment	
	∟UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
	\bot UEEDV0005 Install and maintain cabling for multiple access to telecommunication services	
UEEIC0047	Use instrumentation drawings, specification, standards and equipment manuals	40

Approved Page 7 of 19

	$\hfill \hfill $	
UEEIC0023	Install instrumentation and control cabling and tubing	20
	∟UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	$\hfill \hfill $	
	$\hfill \hfill $	
UEEIC0022	Install instrumentation and control apparatus and associated equipment	20
	∟UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	$\hfill \hfill $	
	$\hfill \hfill $	
UEPMNT346	Maintain electrical equipment	40
	□ UEEEL0003 - Arrange circuits, control and protection for electrical installations Arrange circuits, control and protection for general electrical installations	
	∟ UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟UEECD0020 Fix and secure electrotechnology equipment	
	$\hfill \hfill $	
	∟UEEEL0011 Evaluate performance of low voltage electrical apparatus	
	∟UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits	
	∟ UEEEL0020 Solve problems in low voltage a.c. circuits	
	∟UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	$\hfill \hfill $	
	∟ UEEEL0025 Test and Connect Transformers	

Approved Page 8 of 19

UEPMNT347	Maintain complex electrical equipment	60
	∟ UEPMNT346 Maintain electrical equipment	
UEPMNT348	Maintain electrical electronic equipment	40
	$\hfill \hfill $	
	∟ UEEEL0003 Arrange circuits, control and protection for electrical installations	
	∟UEEEL0011 Evaluate performance of low voltage electrical apparatus	
	∟ UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits	
	∟ UEEEL0020 Solve problems in low voltage a.c. circuits	
	∟ UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	$\hfill \hfill $	
	∟ UEEEL0025 Test and Connect Transformers	
UEPMNT350	Modify electrical equipment	40
	$\hfill \hfill $	
	∟ UEEEL0003 Arrange circuits, control and protection for electrical installations	
	∟ UEEEL0011 Evaluate performance of low voltage electrical apparatus	
	∟ UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits	
	∟ UEEEL0020 Solve problems in low voltage a.c. circuits	
	∟ UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	$\hfill \hfill $	
	∟ UEEEL0025 Test and Connect Transformers	
UEPMNT351	Test and commission electrical equipment	40
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟ UEECD0020 Fix and secure electrotechnology equipment	

Approved Page 9 of 19

	∟ UEECD0043 Solve problems in direct current circuits	
	∟UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
	∟UEEEL0003 Arrange circuits, control and protection for electrical installations	
	∟ UEEEL0011 Evaluate performance of low voltage electrical apparatus	
	∟UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits	
	☐ UEEEL0020 Solve problems in low voltage a.c. circuits	
	∟UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	∟UEEEL0023 Terminate cables, cords and accessories for low voltage circuits	
	∟UEEEL0025 Test and Connect Transformers	
UEPMNT355	Install complex electronic instrumentation equipment	40
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟UEECD0020 Fix and secure electrotechnology equipment	
	∟UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
	∟UEEIC0022 Install instrumentation and control apparatus and associated equipment	
UEPMNT356	Maintain instrumentation equipment	40
	∟ UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟UEECD0020 Fix and secure electrotechnology equipment	
	∟UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
UEPMNT357	Diagnose and repair faults in instrumentation equipment	60
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	☐ UEECD0020 Fix and secure electrotechnology equipment	
	□ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	

Approved Page 10 of 19

UEPMNT358	Modify instrumentation equipment	40
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟ UEECD0020 Fix and secure electrotechnology equipment	
	$\hfill \hfill $	
UEPMNT359	Test and commission instrumentation equipment	40
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟ UEECD0020 Fix and secure electrotechnology equipment	
	$\hfill \ensuremath{\square}$ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
UEPMNT366	Maintain power plant inverter systems	60
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟UEECD0020 Fix and secure electrotechnology equipment	
	∟ UEECD0043 Solve problems in direct current circuits	
	∟UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
	∟UEEEL0003 Arrange circuits, control and protection for electrical installations	
	∟ UEEEL0011 Evaluate performance of low voltage electrical apparatus	
	∟UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits	
	∟ UEEEL0020 Solve problems in low voltage a.c. circuits	
	∟ UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	$\hfill \hfill $	
	∟ UEEEL0025 Test and Connect Transformers	
UEPOPS003	Apply quality systems to work	20
UEPOPS017	Conduct single energy source isolation procedures for permit to work	40
UEPOPS047	Maintain quality systems within the team	20

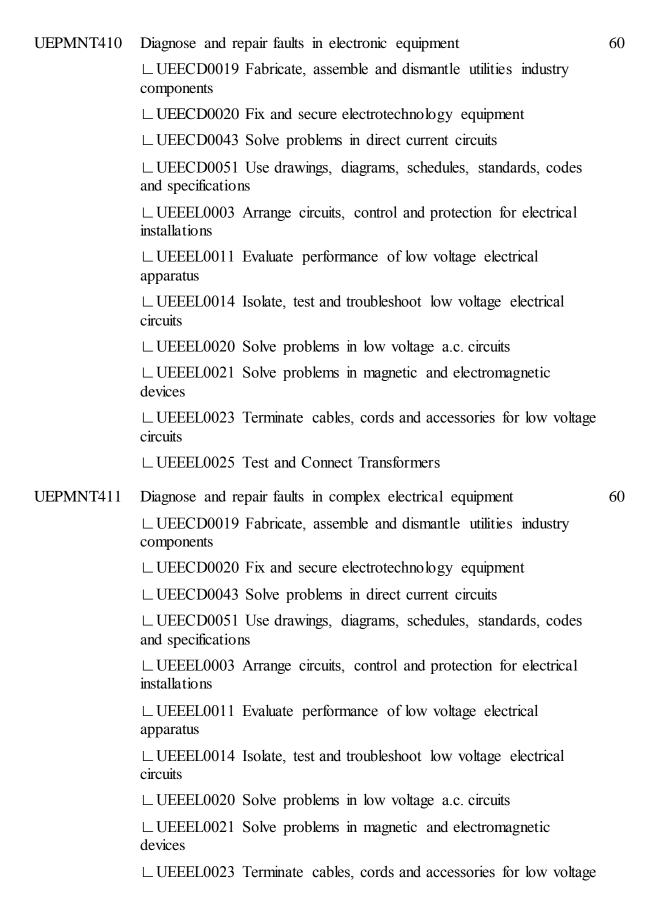
Approved Page 11 of 19

∟UEPOPS003 Apply quality systems to work

Group C Elective units		Weighting points
UEECO0001	Estimate electrotechnology projects	40
UEEEL0025	Test and connect transformers	80
	∟UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟UEECD0020 Fix and secure electrotechnology equipment	
	∟UEECD0043 Solve problems in direct current circuits	
	$\hfill \hfill $	
	∟UEEEL0019 Solve problems in direct current (d.c.) machines	
	∟ UEEEL0020 Solve problems in low voltage a.c. circuits	
	∟ UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	$\hfill \hfill $	
UEEEL0047	Identify, shut down and restart systems with alternate supplies	
	∟UEECD0007 Apply work health and safety regulations, codes and practices in the workplace	
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟UEECD0020 Fix and secure electrotechnology equipment	
	∟UEECD0043 Solve problems in direct current circuits	
	$\hfill \hfill $	
	∟UEEEL0003 Arrange circuits, control and protection for general electrical installations	
	∟UEEEL0019 Solve problems in direct current (d.c.) machines	
	∟ UEEEL0020 Solve problems in low voltage a.c. circuits	
	∟UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	∟UEEEL0023 Terminate cables, cords and accessories for low voltage	

Approved Page 12 of 19

circuits



Approved Page 13 of 19

circuits ∟ UEEEL0025 Test and Connect Transformers 60 UEPMNT412 Modify complex electrical equipment ∟ UEECD0019 Fabricate, assemble and dismantle utilities industry components ∟ UEECD0020 Fix and secure electrotechnology equipment ∟ UEECD0043 Solve problems in direct current circuits ∟ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications LUEEEL0003 Arrange circuits, control and protection for electrical installations ∟ UEEEL0011 Evaluate performance of low voltage electrical apparatus ∟ UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits ∟ UEEEL0020 Solve problems in low voltage a.c. circuits ∟ UEEEL0021 Solve problems in magnetic and electromagnetic devices ∟ UEEEL0023 Terminate cables, cords and accessories for low voltage circuits ∟ UEEEL0025 Test and Connect Transformers ∟ UEPMNT350 Modify electrical equipment 60 UEPMNT414 Test and commission complex electrical equipment ∟ UEECD0019 Fabricate, assemble and dismantle utilities industry components ∟ UEECD0020 Fix and secure electrotechnology equipment ∟ UEECD0043 Solve problems in direct current circuits ∟ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications LUEEEL0003 Arrange circuits, control and protection for electrical installations ∟ UEEEL0011 Evaluate performance of low voltage electrical apparatus □ UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits

Approved Page 14 of 19

LUEEEL0021 Solve problems in magnetic and electromagnetic

∟ UEEEL0020 Solve problems in low voltage a.c. circuits

devices LUEEEL0023 Terminate cables, cords and accessories for low voltage circuits ∟ UEEEL0025 Test and Connect Transformers ∟ UEPMNT351 Test and commission electrical equipment 80 UEPMNT417 Inspect electrical generators and diagnose faults ∟ UEECD0019 Fabricate, assemble and dismantle utilities industry components ∟ UEECD0020 Fix and secure electrotechnology equipment ∟ UEECD0043 Solve problems in direct current circuits ∟ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications LUEEEL0003 Arrange circuits, control and protection for electrical installations ∟ UEEEL0011 Evaluate performance of low voltage electrical apparatus ∟ UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits ∟ UEEEL0020 Solve problems in low voltage a.c. circuits ∟ UEEEL0021 Solve problems in magnetic and electromagnetic devices ∟ UEEEL0023 Terminate cables, cords and accessories for low voltage circuits ∟ UEEEL0025 Test and Connect Transformers ∟ UEPMNT351 Test and commission electrical equipment UEPMNT421 Conduct technical inspection of process plant and equipment 60 ∟ UEECD0019 Fabricate, assemble and dismantle utilities industry components ∟ UEECD0020 Fix and secure electrotechnology equipment ∟ UEECD0043 Solve problems in direct current circuits ∟ UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications LUEEEL0003 Arrange circuits, control and protection for electrical installations ∟ UEEEL0011 Evaluate performance of low voltage electrical apparatus ∟ UEEEL0014 Isolate, test and troubleshoot low voltage electrical

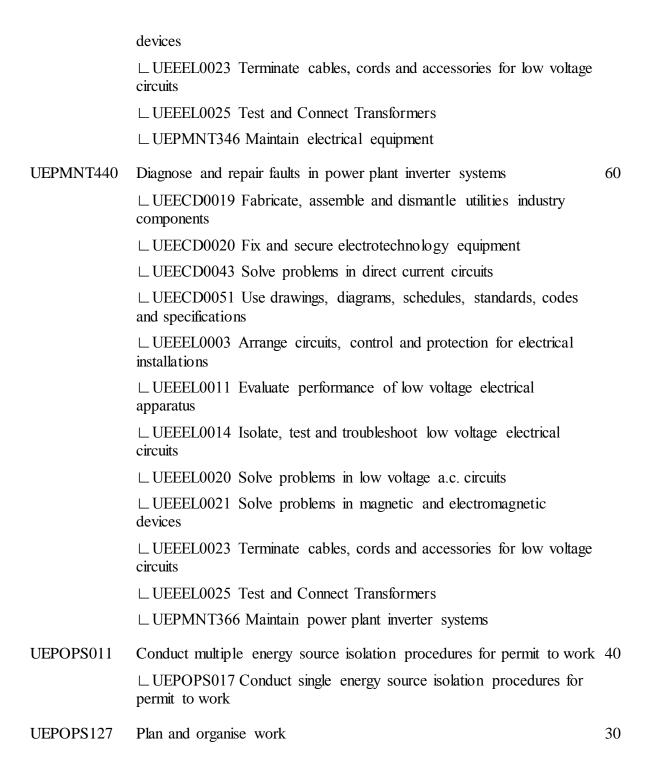
Approved Page 15 of 19

	circuits	
	∟UEEEL0020 Solve problems in low voltage a.c. circuits	
	∟UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	$\hfill \hfill $	
	∟ UEEEL0025 Test and Connect Transformers	
	∟UEPMNT351 Test and commission electrical equipment	
UEPMNT422	Conduct performance testing on process plant and equipment	60
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟UEECD0020 Fix and secure electrotechnology equipment	
	∟UEECD0043 Solve problems in direct current circuits	
	$\hfill \hfill $	
	∟UEEEL0003 Arrange circuits, control and protection for electrical installations	
	∟UEEEL0011 Evaluate performance of low voltage electrical apparatus	
	∟UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits	
	∟ UEEEL0020 Solve problems in low voltage a.c. circuits	
	∟UEEEL0021 Solve problems in magnetic and electromagnetic devices	
	$\hfill \ensuremath{\sqcup}$ UEEEL0023 Terminate cables, cords and accessories for low voltage circuits	
	∟ UEEEL0025 Test and Connect Transformers	
	∟UEPMNT351 Test and commission electrical equipment	
UEPMNT425	Maintain complex instrumentation equipment	80
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟UEECD0020 Fix and secure electrotechnology equipment	
	∟UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
	∟UEPMNT356 Maintain instrumentation equipment	
UEPMNT427	Diagnose and repair faults in complex instrumentation equipment	80

Approved Page 16 of 19

	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟ UEECD0020 Fix and secure electrotechnology equipment	
	$\hfill \hfill $	
	∟UEPMNT356 Maintain instrumentation equipment	
UEPMNT428	Modify complex instrumentation equipment	80
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟UEECD0020 Fix and secure electrotechnology equipment	
	\bot UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
	∟ UEPMNT356 Maintain instrumentation equipment	
UEPMNT430	Test and commission complex instrumentation equipment	80
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟UEECD0020 Fix and secure electrotechnology equipment	
	∟UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
	∟UEPMNT359 Test and commission instrumentation equipment	
UEPMNT433	Conduct routine generator electrical maintenance	60
	∟UEECD0019 Fabricate, assemble and dismantle utilities industry components	
	∟UEECD0043 Solve problems in direct current circuits	
	∟UEECD0051 Use drawings, diagrams, schedules, standards, codes and specifications	
	∟UEEEL0003 Arrange circuits, control and protection for electrical installations	
	∟ UEEEL0011 Evaluate performance of low voltage electrical apparatus	
	∟UEEEL0014 Isolate, test and troubleshoot low voltage electrical circuits	
	∟UEEEL0020 Solve problems in low voltage a.c. circuits	
	∟UEEEL0021 Solve problems in magnetic and electromagnetic	

Page 17 of 19 Approved



Qualification Mapping Information

This qualification replaces and is equivalent to UEP40318 Certificate IV in ESI Generation Maintenance - Electrical Electronics

Approved Page 18 of 19

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1715b9fa-e7bd-441c-bb8d-cf22c9c825a8

Approved Page 19 of 19