UET60219 Advanced Diploma of ESI - Power Systems

Release 2

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Modification History

Release 2. Removed deleted units UETTDRDS40, UETTDRDS41, UETTDRDS44, UETTDRDS47, UETTDRDS48, UETTDRDS49, UETTDRDS51, UETTDRDS52, UETTDRDS53, UETTDRDS54, UETTDRDS55, UETTDRDS56, UETTDRDS57, UETTDRDS58, UETTDRIS66, UETTDRSO33, UETTDRSO34, UETTDRSO39, UETTDRSO42, UETTDRSO43, UETTDRSO44 and UETTDRSO51 from the qualification due to zero enrolments.

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

Qualification Description

This qualification provides the skills and knowledge to work in the electricity supply industry (ESI) as a Power System Senior Technical Officer or a Power Distribution System Engineer.

This qualification covers high-level managerial, design, testing and system operation functions in the transmission and distribution sectors of the ESI. These roles may also install, commission, maintain, diagnose and repair the hardware and software of complex power system protection, control and metering systems.

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 **2160 weighting points** comprising:

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

1340 general elective weighting points from the general elective units listed below.

Choose a total of 1340 **weighting points** elective units from the list below, of which between 0 and 360 **weighting points** can be taken from Group A; between 0 and 400 **weighting points** can be taken from Group B; between 0 and 200 **weighting points** can be taken from Group C, between 140 and 900 **weighting points** can be taken from Group D and between 440 and 1200 **weighting points** taken from Group E.

Up to 360 weighting points of the general elective units Group A may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided selected units contribute to the vocational outcome of the qualification. Previously assigned weighting points are listed in 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.

Weighting Points

Core units

UEENEED104A	Use engineering applications software on personal computers	40
	∟ UEENEEE101A Apply Occupational Health Safety regulations, codes and practices in the workplace	
UEENEEE083A	Establish and follow a competency development plan in an electrotechnology engineering discipline	120
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	
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40
	∟ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE125A	Provide engineering solutions for problems in complex multiple path circuits	60
	∟ UEENEEE126A Provide solutions to basic engineering computational problems	
UEENEEE126A	Provide solutions to basic engineering computational problems	60

Australian Industry Standards

∟ UEENEEE029B Solve electrotechnical problems

or

∟ UEENEEG102A Solve problems in low voltage a.c.
circuits

or

∟ UEENEEH014B Troubleshoot frequency dependent
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	
UEENEEG149A	Provide engineering solutions to problems in complex polyphase power circuits	60
	∟ UEENEEE125A Provide engineering solutions for problems in complex multiple path circuits	
	and	
	∟ UEENEEG102A Solve problems in low voltage a.c. circuits	
UETTDREL11	Apply sustainable energy and environmental procedures	20
UETTDREL16	Working safely near live electrical apparatus	20
UETTDRIS62	Implement and monitor the power system organisational WHS/OHS policies, procedures and programs	30
	Common Unit Group	
	∟ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	∟ UETTDREL16 Working safely near live electrical apparatus	

UETTDRIS63	Implement & monitor power system environmental & sustainable energy management policies & procedures	30
	Electrotechnology Pathway Unit Group	
	∟ UEENEEK142A Apply environmentally and sustainable procedures in the energy sector	
	ESI - TDR Pathway Unit Group	
	∟ UETTDREL11 Apply sustainable energy and environmental procedures	

Group A: Imported and common elective units		Weighting Points
BSBCUS501	Manage quality customer service	40
BSBFIM501	Manage budgets and financial plans	70
BSBINM501	Manage an information or knowledge management system	50
BSBINN502	Build and sustain an innovative work environment	50
BSBLED501	Develop a workplace learning environment	60
BSBMGT502	Manage people performance	70
BSBMGT516	Facilitate continuous improvement	60
BSBMGT517	Manage operational plan	60
BSBSUS501	Develop workplace policy and procedures for sustainability	50
BSBWOR501	Manage personal work priorities and professional development	60
BSBWOR502	Lead and manage team effectiveness	60

Group B: Qualification elective units		Weighting Points
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

UEENEEH102A	Repairs basic electronic apparatus faults by replacement of components	40
	∟ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	∟ UEENEEE102A Fabricate, dismantle, assemble of utilities industry components	
UEENEEH112A	Troubleshoot digital sub-systems	80
	∟ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
	∟ UEENEEH102A Repair basic electronic apparatus faults by replacement of components	
UEENEEH139A	Troubleshoot basic amplifier circuits	40
	∟ UEENEEH102A Repair basic electronic apparatus faults by replacement of components	
	AND	
	∟ UEENEEH114A Troubleshoot resonance circuits in an electronic apparatus	
	OR	
	∟ UEENEEG102A Solve problems in low voltage a.c. circuits	
UETTDREL15	Respond to power systems technical enquiries and requests	40
UETTDRIS67	Solve problems in energy supply network equipment	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

    ∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

    ∟ UEENEEG102A Solve problems in low voltage a.c. circuits

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

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

UETTDRIS68	Solve problems in energy supply network protection equipment and systems	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

    ∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

    ∟ UEENEEG102A Solve problems in low voltage a.c. circuits

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

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

    ∟ UETTDRIS67 Solve problems in energy supply network equipment

Group C: Qualification elective units	**Weighting Points**
UEENEED117A	Install and configure network systems for internetworking	120
	∟UEENEEE101A Apply Occupational Health Safety regulations, codes and practices in the workplace	
UEENEEI155A	Develop structured programs to control external devices	40
	∟UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	
UETTDRDS31	Draft and layout a power system overhead distribution extension	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	
	∟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. circuits	
	∟UETTDREL11 Apply sustainable energy and environmental procedures	
	∟UETTDREL16 Working safely near live electrical apparatus	
	∟UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs	
	∟UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures	
UETTDRDS32	Draft and layout a power system underground distribution extension	60
	Common Unit Group	
	∟UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace	

Australian Industry Standards

    ∟ UEENEEE102A Fabricate, assemble and dismantle utilities industry components

    ∟ UEENEEE104A Solve problems in d.c. circuits

    ∟ 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. circuits

    ∟ UETTDREL11 Apply sustainable energy and environmental procedures

    ∟ UETTDREL16 Working safely near live electrical apparatus

    ∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

    ∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

UETTDRDS33	Draft and layout a power system street lighting system	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

    ∟ 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. circuits

    ∟ UETTDREL11 Apply sustainable energy and environmental procedures

    ∟ UETTDREL16 Working safely near live electrical apparatus

    ∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

UETTDRDS34	Draft and layout a power system distribution substation minor upgrade	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

∟ 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. circuits

∟ UETTDREL11 Apply sustainable energy and environmental procedures

∟ UETTDREL16 Working safely near live electrical apparatus

∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

Group D: Qualification elective units		**Weighting Points**
UEENEEI156A	Develop and test code for microcontroller devices	60

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

UETTDRDS35	Design overhead distribution power systems	140

Common Unit Group

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

∟ UEENEEE102A Fabricate, assemble and dismantle utilities industry components

       Australian Industry Standards

∟ UEENEEE104A Solve problems in d.c. circuits

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

∟ UEENEEE125A Provide engineering solutions for problems in complex multiple path circuits

∟ UEENEEE126A Provide solutions to basic engineering computational problems

∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

∟ UEENEEG102A Solve problems in low voltage a.c. circuits

∟ UEENEEG149A Provide engineering solutions to problems in complex polyphase power circuits

∟ UETTDREL11 Apply sustainable energy and environmental procedures

∟ UETTDREL16 Working safely near live electrical apparatus

∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

Pathway Unit Group 1

∟ UETTDRDS39 Prepare and manage detailed construction plans for electrical power system infrastructure

∟ UETTDRDS45 Organise and implement ESI line and easement surveys

Pathway Unit Group 2

∟ UETTDRDS43 Develop high voltage and low voltage distribution protection systems

UETTDRDS36	Design underground distribution power systems	140

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

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

∟ UEENEEE125A Provide engineering solutions for problems in complex multiple path circuits

∟ UEENEEE126A Provide solutions to basic engineering computational problems

∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

∟ UEENEEG102A Solve problems in low voltage a.c. circuits

∟ UEENEEG149A Provide engineering solutions to problems in complex polyphase power circuits

∟ UETTDREL11 Apply sustainable energy and environmental procedures

∟ UETTDREL16 Working safely near live electrical apparatus

∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

Pathway Unit Group 1

∟ UETTDRDS39 Prepare and manage detailed construction plans for electrical power system infrastructure

∟ UETTDRDS45 Organise and implement ESI line and easement surveys

Pathway Unit Group 2

∟ UETTDRDS43 Develop high voltage and low voltage distribution protection systems

UETTDRDS37	Design power system distribution substations	140

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

∟ UEENEEE107A Use drawings, diagrams, schedules,

standards, codes and specifications

∟ UEENEEE125A Provide engineering solutions for problems in complex multiple path circuits

∟ UEENEEE126A Provide solutions to basic engineering computational problems

∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

∟ UEENEEG102A Solve problems in low voltage a.c. circuits

∟ UEENEEG149A Provide engineering solutions to problems in complex polyphase power circuits

∟ UETTDREL11 Apply sustainable energy and environmental procedures

∟ UETTDREL16 Working safely near live electrical apparatus

∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

Pathway Unit Group 1

∟ UETTDRDS39 Prepare and manage detailed construction plans for electrical power system infrastructure

∟ UETTDRDS45 Organise and implement ESI line and easement surveys

Pathway Unit Group 2

∟ UETTDRDS43 Develop high voltage and low voltage distribution protection systems

UETTDRDS38	Design power system public lighting systems	140

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

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

∟ UEENEEE125A Provide engineering solutions for problems in complex multiple path circuits

∟ UEENEEE126A Provide solutions to basic engineering computational problems

∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

∟ UEENEEG102A Solve problems in low voltage a.c. circuits

∟ UEENEEG149A Provide engineering solutions to problems in complex polyphase power circuits

∟ UETTDREL11 Apply sustainable energy and environmental procedures

∟ UETTDREL16 Working safely near live electrical apparatus

∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

Pathway Unit Group 1

∟ UETTDRDS39 Prepare and manage detailed construction plans for electrical power system infrastructure

∟ UETTDRDS45 Organise and implement ESI line and easement surveys

Pathway Unit Group 2

∟ UETTDRDS43 Develop high voltage and low voltage distribution protection systems

UETTDRDS39	Prepare and manage detailed construction plans for electrical power system infrastructure	140

Common Unit Group

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

∟ UEENEEE104A Solve problems in d.c. circuits

∟ 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. circuits

∟ UETTDREL11 Apply sustainable energy and environmental procedures

∟ UETTDREL16 Working safely near live electrical apparatus

∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

UETTDRDS42	Investigate quality of power systems supply issues	140

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

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

∟ UEENEEE125A Provide engineering solutions for problems in complex multiple path circuits

∟ UEENEEE126A Provide solutions to basic engineering computational problems

∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

∟ UEENEEG102A Solve problems in low voltage a.c. circuits

∟ UEENEEG149A Provide engineering solutions to problems in complex polyphase power circuits

∟ UETTDREL11 Apply sustainable energy and environmental procedures

∟ UETTDREL16 Working safely near live electrical apparatus

∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟ UETTDRIS63 Implement & monitor power system

environmental & sustainable energy management policies & procedures

∟UETTDRDS35 Design overhead distribution power systems

∟UETTDRDS36 Design underground distribution power systems

Pathway Unit Group 1

∟UETTDRDS39 Prepare and manage detailed construction plans for electrical power system infrastructure

∟UETTDRDS45 Organise and implement ESI line and easement surveys

Pathway Unit Group 2

∟UETTDRDS43 Develop high voltage and low voltage distribution protection systems

UETTDRDS43	Develop high voltage and low voltage distribution protection systems	150

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

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

∟UEENEEE125A Provide engineering solutions for problems in complex multiple path circuits

∟UEENEEE126A Provide solutions to basic engineering computational problems

∟UEENEEG101A Solve problems in electromagnetic devices and related circuits

∟UEENEEG102A Solve problems in low voltage a.c. circuits

∟UEENEEG149A Provide engineering solutions to problems in complex polyphase power circuits

∟UETTDREL11 Apply sustainable energy and environmental procedures

∟UETTDREL16 Working safely near live electrical apparatus

∟UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

| UETTDRDS45 | Organise and implement ESI line and easement surveys | 140 |

Common Unit Group

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

∟UEENEEE104A Solve problems in d.c. circuits

∟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. circuits

∟UETTDRDS39 Prepare and manage detailed construction plans for electrical power system infrastructure

∟UETTDREL11 Apply sustainable energy and environmental procedures

∟UETTDREL16 Working safely near live electrical apparatus

∟UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

| UETTDRDS46 | Develop planned power systems outage strategies | 140 |

Common Unit Group

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

∟UEENEED104A Use engineering applications software on personal computers

∟UETTDREL16 Working safely near live electrical apparatus

∟UETTDRIS62 Implement and monitor the power

system organisational WHS/OHS policies, procedures and programs

UETTDRIS69	Diagnose and rectify faults in energy supply apparatus	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

∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

∟ UEENEEG102A Solve problems in low voltage a.c. circuits

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

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

∟ UETTDRIS67 Solve problems in energy supply network equipment

∟ UETTDRIS68 Solve problems in energy supply network protection equipment and systems

UETTDRIS70	Diagnose and rectify faults in electrical energy distribution systems	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

∟ UEENEEG101A Solve problems in electromagnetic

devices and related circuits

∟ UEENEEG102A Solve problems in low voltage a.c. circuits

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

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

∟ UETTDRIS67 Solve problems in energy supply network equipment

∟ UETTDRIS68 Solve problems in energy supply network protection equipment and systems

∟ UETTDRIS69 Diagnose and rectify faults in energy supply apparatus

| UETTDRIS72 | Diagnose and rectify faults in distributed generation systems | 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

∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

∟ UEENEEG102A Solve problems in low voltage a.c. circuits

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

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

∟ UETTDRIS67 Solve problems in energy supply network equipment

∟ UETTDRIS68 Solve problems in energy supply network protection equipment and systems

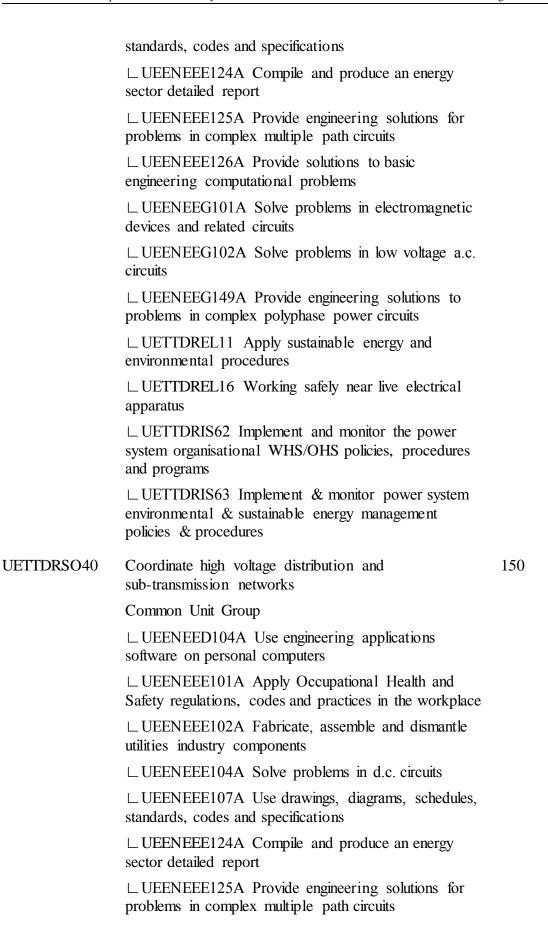∟ UETTDRIS69 Diagnose and rectify faults in energy supply apparatus

| UETTDRSO36 | Develop low voltage distribution switching programs | 150 |

Common Unit Group

∟ UEENEED104A Use engineering applications software on personal computers

∟ 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

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

∟ UEENEEE124A Compile and produce an energy sector detailed report

∟ UEENEEE125A Provide engineering solutions for problems in complex multiple path circuits

∟ UEENEEE126A Provide solutions to basic engineering computational problems

∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

∟ UEENEEG102A Solve problems in low voltage a.c. circuits

∟ UEENEEG149A Provide engineering solutions to problems in complex polyphase power circuits

∟ UETTDREL11 Apply sustainable energy and environmental procedures

∟ UETTDREL16 Working safely near live electrical apparatus

∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

| UETTDRSO37 | Develop high voltage distribution and sub-transmission switching programs | 150 |

Common Unit Group

∟ UEENEED104A Use engineering applications software on personal computers

∟ 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

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

∟ UEENEEE124A Compile and produce an energy sector detailed report

∟ UEENEEE125A Provide engineering solutions for problems in complex multiple path circuits

∟ UEENEEE126A Provide solutions to basic engineering computational problems

∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

∟ UEENEEG102A Solve problems in low voltage a.c. circuits

∟ UEENEEG149A Provide engineering solutions to problems in complex polyphase power circuits

∟ UETTDREL11 Apply sustainable energy and environmental procedures

∟ UETTDREL16 Working safely near live electrical apparatus

∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

UETTDRSO38	Develop and evaluate power systems transmission switching programs	150

Common Unit Group

∟ UEENEED104A Use engineering applications software on personal computers

∟ 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

∟ UEENEEE107A Use drawings, diagrams, schedules,

standards, codes and specifications

∟ UEENEEE124A Compile and produce an energy sector detailed report

∟ UEENEEE125A Provide engineering solutions for problems in complex multiple path circuits

∟ UEENEEE126A Provide solutions to basic engineering computational problems

∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

∟ UEENEEG102A Solve problems in low voltage a.c. circuits

∟ UEENEEG149A Provide engineering solutions to problems in complex polyphase power circuits

∟ UETTDREL11 Apply sustainable energy and environmental procedures

∟ UETTDREL16 Working safely near live electrical apparatus

∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

UETTDRSO40	Coordinate high voltage distribution and sub-transmission networks	150

Common Unit Group

∟ UEENEED104A Use engineering applications software on personal computers

∟ 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

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

∟ UEENEEE124A Compile and produce an energy sector detailed report

∟ UEENEEE125A Provide engineering solutions for problems in complex multiple path circuits

          ∟ UEENEEE126A Provide solutions to basic engineering computational problems

          ∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

          ∟ UEENEEG102A Solve problems in low voltage a.c. circuits

          ∟ UEENEEG149A Provide engineering solutions to problems in complex polyphase power circuits

          ∟ UETTDREL11 Apply sustainable energy and environmental procedures

          ∟ UETTDREL16 Working safely near live electrical apparatus

          ∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

          ∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

          ∟ UETTDRSO37 Develop high voltage distribution and sub-transmission switching programs

UETTDRSO45	Operate and monitor system SCADA equipment	150

Common Unit Group

          ∟ UETTDREL15 Respond to power systems technical enquiries and requests

UETTDRSO46	Monitor and control the field staff activities	150

To minimise incidents related to safe systems of work, entry into this unit requires at a minimum that an individual has demonstrated or possesses relevant technical engineering discipline competencies of at least AQF level 3. It is intended that an individual will be expected to perform with a large degree of autonomy in decision-making, whilst in an individual environment.

This may include immediate response to protect human life, adverse effect on safety, security of supply or the integrity of the assets.

NOTE: Typically the following disciplines provide direct entry; electrical or instrumentation, fitting and turning or mechanical trade.

Where an individual does not possess or demonstrate the requisite entry requirement, an equivalent bridging

program shall be used to ensure equivalence of entry.

UETTDRSO47	Coordinate high voltage transmission network	150

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∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

∟ UETTDRSO38 Develop and evaluate power systems transmission switching programs

UETTDRSO48	Respond to discrete and interdependent protection operations	150

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Distribution and Sub-transmission Pathway Unit Group

∟ UETTDRSO37 Develop high voltage distribution and sub-transmission switching programs

∟ UETTDRSO40 Coordinate high voltage distribution and sub-transmission networks

Transmission Pathway Unit Group

∟ UETTDRSO38 Develop and evaluate power systems

transmission switching programs

└ UETTDRSO47 Coordinate high voltage transmission network

UETTDRSO49	Coordinate power system operations in a regulated energy market	150

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Distribution and Sub-transmission Pathway Unit Group

└ UETTDRSO37 Develop high voltage distribution and

sub-transmission switching programs

∟ UETTDRSO40 Coordinate high voltage distribution and sub-transmission networks

Transmission Pathway Unit Group

∟ UETTDRSO38 Develop and evaluate power systems transmission switching programs

∟ UETTDRSO47 Coordinate high voltage transmission network

UETTDRTS21	Maintain interdependent network protection and control systems	150

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∟ UETTDRTS29 Develop power systems secondary isolation instructional documents

UETTDRTS22	Commission interdependent network protection and control systems	150

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∟UETTDRTS21 Maintain interdependent network protection and control systems

∟UETTDRTS29 Develop power systems secondary isolation instructional documents

UETTDRTS25	Maintain and test and metering schemes	140

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∟UETTDRTS29 Develop power systems secondary isolation instructional documents

| UETTDRTS26 | Commission power systems metering schemes | 150 |

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∟ UETTDRTS25 Maintain and test and metering schemes

∟ UETTDRTS29 Develop power systems secondary isolation instructional documents

| UETTDRTS27 | Perform accuracy checks on power systems instrument transformers | 150 |

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∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

| UETTDRTS28 | Repair, test and calibrate protection relays and meters | 150 |

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└ UEENEEE104A Solve problems in d.c. circuits

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| UETTDRTS29 | Develop power systems secondary isolation instructional documents | 150 |

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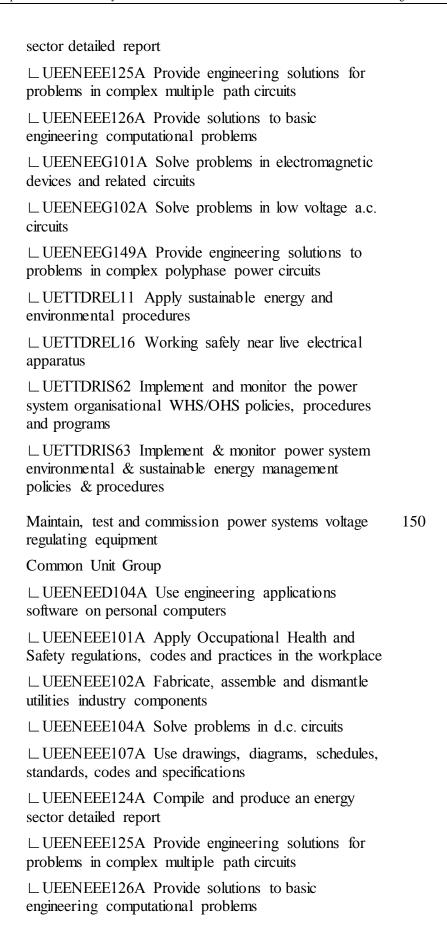|		
UETTDRTS31	Maintain, test and commission power systems voltage regulating equipment	150

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      └ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

UETTDRTS34	Install and maintain power system communication equipment	150

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      └ UEENEEE102A Fabricate, assemble and dismantle utilities industry components

      └ UEENEEE104A Solve problems in d.c. circuits

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∟ UETTDREL16 Working safely near live electrical apparatus

∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

Group E: Qualification elective units		Weighting Points
UETTDRDS50	Design customer power system substations	140

Common Unit Group

∟ UEENEEE101A Apply Occupational Health and Safety regulations, codes and practices in the workplace
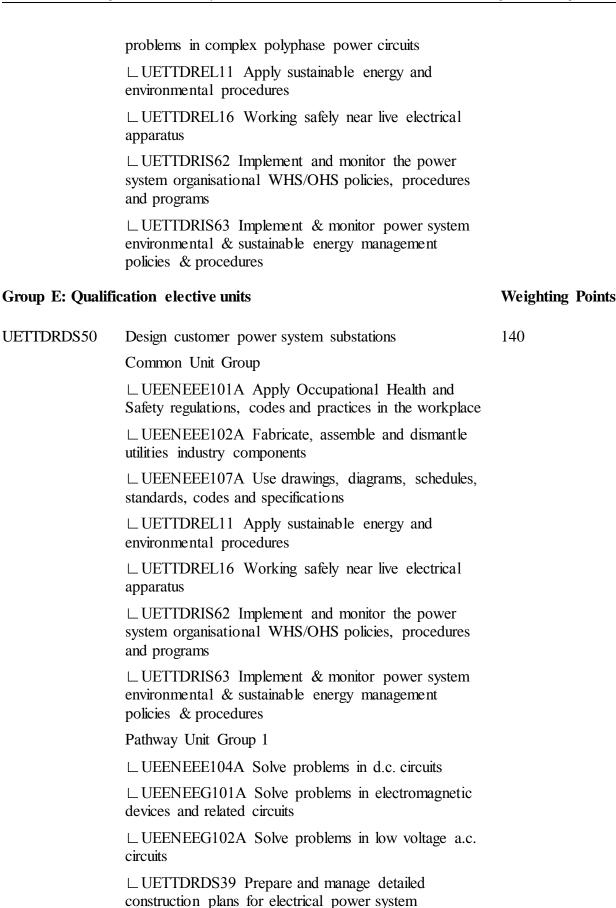
∟ UEENEEE102A Fabricate, assemble and dismantle utilities industry components

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

∟ UETTDREL11 Apply sustainable energy and environmental procedures

∟ UETTDREL16 Working safely near live electrical apparatus

∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

Pathway Unit Group 1

∟ UEENEEE104A Solve problems in d.c. circuits

∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

∟ UEENEEG102A Solve problems in low voltage a.c. circuits

∟ UETTDRDS39 Prepare and manage detailed construction plans for electrical power system

infrastructure

∟ UETTDRDS45 Organise and implement ESI line and easement surveys

Pathway Unit Group 2

∟ UEENEEE104A Solve problems in d.c. circuits

∟ UEENEEE125A Provide engineering solutions for problems in complex multiple path circuits

∟ UEENEEE126A Provide solutions to basic engineering computational problems

∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

∟ UEENEEG102A Solve problems in low voltage a.c. circuits

∟ UEENEEG149A Provide engineering solutions to problems in complex polyphase power circuits

∟ UETTDRDS43 Develop high voltage and low voltage distribution protection systems

UETTDRIS71	Diagnose and rectify faults in electrical energy supply transmission systems	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

∟ UEENEEG101A Solve problems in electromagnetic devices and related circuits

∟ UEENEEG102A Solve problems in low voltage a.c. circuits

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

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

└ UETTDRIS67 Solve problems in energy supply network equipment

└ UETTDRIS68 Solve problems in energy supply network protection equipment and systems

└ UETTDRIS69 Diagnose and rectify faults in energy supply apparatus

UETTDRIS73	Develop engineering solutions for energy supply power transformer problems	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

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└ UETTDRIS69 Diagnose and rectify faults in energy supply apparatus
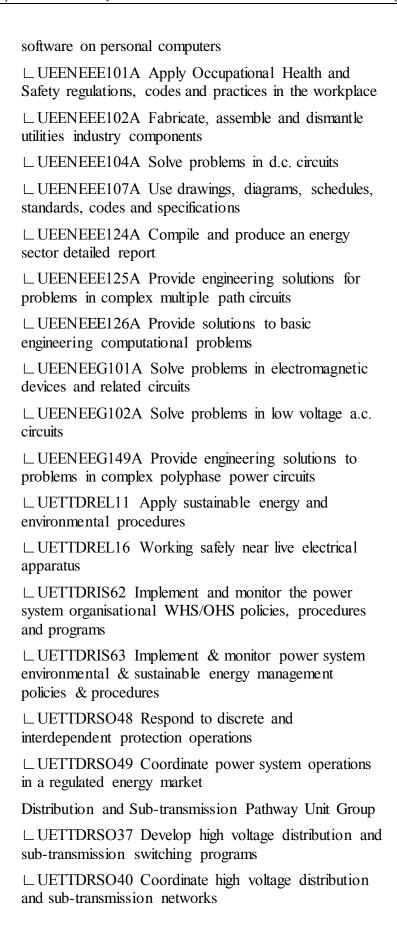
Distribution Pathway Unit Group

└ UETTDRIS70 Diagnose and rectify faults in electrical energy distribution systems

Transmission Pathway Unit Group

└ UETTDRIS71 Diagnose and rectify faults in electrical energy supply transmission systems

Distributed Generation Pathway Unit Group

└ UETTDRIS72 Diagnose and rectify faults in distributed generation systems

UETTDRSO32	Manage power systems network faults	180

Common Unit Group

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└ 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

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└ UETTDREL11 Apply sustainable energy and environmental procedures

└ UETTDREL16 Working safely near live electrical apparatus

└ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

└ UETTDRIS63 Implement & monitor power system

environmental & sustainable energy management policies & procedures

∟ UETTDRSO41 Manage power systems transmission networks

∟ UETTDRSO48 Respond to discrete and interdependent protection operations

∟ UETTDRSO49 Coordinate power system operations in a regulated energy market

∟ UETTDRSO50 Respond to complex power system protection operations

Generation/Distribution and Sub-transmission Pathway Unit Group

∟ UETTDRSO37 Develop high voltage distribution and sub-transmission switching programs

∟ UETTDRSO40 Coordinate high voltage distribution and sub-transmission networks

Generation/Transmission Pathway Unit Group

∟ UETTDRSO38 Develop and evaluate power systems transmission switching programs

∟ UETTDRSO47 Coordinate high voltage transmission network

Distribution and Sub-transmission Pathway Unit Group

∟ UETTDRSO35 Manage high voltage distribution and sub-transmission network demand

∟ UETTDRSO37 Develop high voltage distribution and sub-transmission switching programs

∟ UETTDRSO40 Coordinate high voltage distribution and sub-transmission networks

Transmission Pathway Unit Group

∟ UETTDRSO38 Develop and evaluate power systems transmission switching programs

∟ UETTDRSO41 Manage power systems transmission networks

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UETTDRSO35	Manage high voltage distribution and sub-transmission network demand	180

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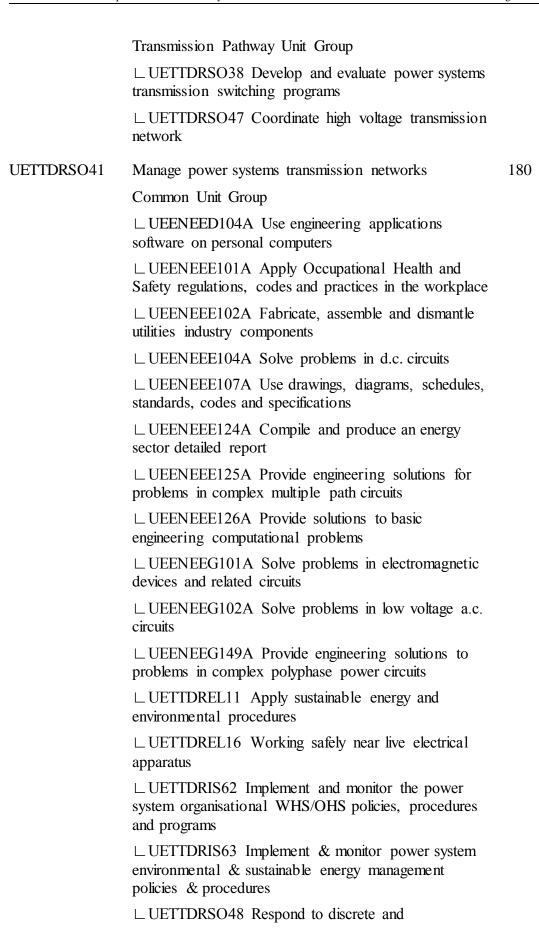
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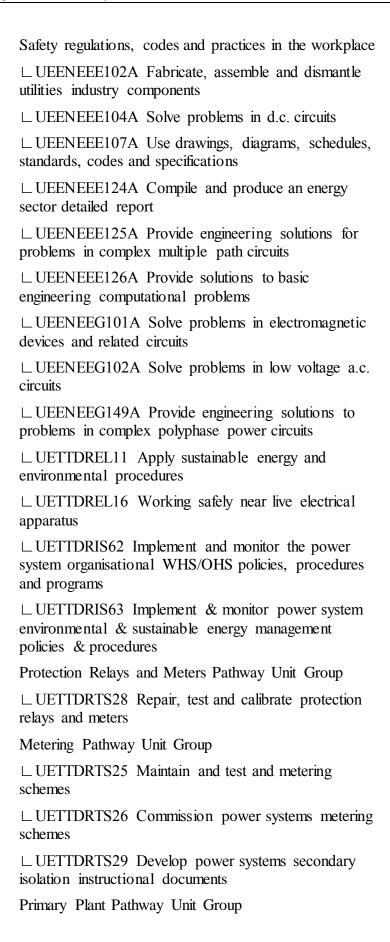Distribution and Sub-transmission Pathway Unit Group

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∟ UETTDRSO49 Coordinate power system operations in a regulated energy market

Generation/Distribution and Sub-transmission Pathway Unit Group

∟ UETTDRSO37 Develop high voltage distribution and sub-transmission switching programs

∟ UETTDRSO40 Coordinate high voltage distribution and sub-transmission networks

Generation/Transmission Pathway Unit Group

∟ UETTDRSO38 Develop and evaluate power systems transmission switching programs

∟ UETTDRSO47 Coordinate high voltage transmission network

Distribution and Sub-transmission Pathway Unit Group

∟ UETTDRSO35 Manage high voltage distribution and sub-transmission network demand

∟ UETTDRSO37 Develop high voltage distribution and sub-transmission switching programs

∟ UETTDRSO40 Coordinate high voltage distribution and sub-transmission networks

Transmission Pathway Unit Group

∟ UETTDRSO38 Develop and evaluate power systems transmission switching programs

∟ UETTDRSO41 Manage power systems transmission networks

∟ UETTDRSO47 Coordinate high voltage transmission network

| UETTDRTS23 | Conduct evaluation of power system substation faults | 140 |

Common Unit Group

∟ UEENEED104A Use engineering applications software on personal computers

∟ 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

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

∟ UEENEEE124A Compile and produce an energy sector detailed report

∟ UEENEEE125A Provide engineering solutions for problems in complex multiple path circuits

∟ UEENEEE126A Provide solutions to basic engineering computational problems

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∟ UETTDREL11 Apply sustainable energy and environmental procedures

∟ UETTDREL16 Working safely near live electrical apparatus

∟ UETTDRIS62 Implement and monitor the power system organisational WHS/OHS policies, procedures and programs

∟ UETTDRIS63 Implement & monitor power system environmental & sustainable energy management policies & procedures

| UETTDRTS24 | Design testing and commissioning procedures for field devices and substations | 140 |

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Protection Relays and Meters Pathway Unit Group

∟ UETTDRTS28 Repair, test and calibrate protection relays and meters

Metering Pathway Unit Group

∟ UETTDRTS25 Maintain and test and metering schemes

∟ UETTDRTS26 Commission power systems metering schemes

∟ UETTDRTS29 Develop power systems secondary isolation instructional documents

Primary Plant Pathway Unit Group

∟ UETTDRTS29 Develop power systems secondary isolation instructional documents

∟ UETTDRTS32 Conduct evaluation of power systems primary plant

Protection Systems Pathway Unit Group

∟ UETTDRTS21 Maintain interdependent network protection and control systems

∟ UETTDRTS29 Develop power systems secondary isolation instructional documents

∟ UETTDRTS35 Maintain complex network protection and control systems

UETTDRTS30	Design power systems secondary isolation instructional documents	160

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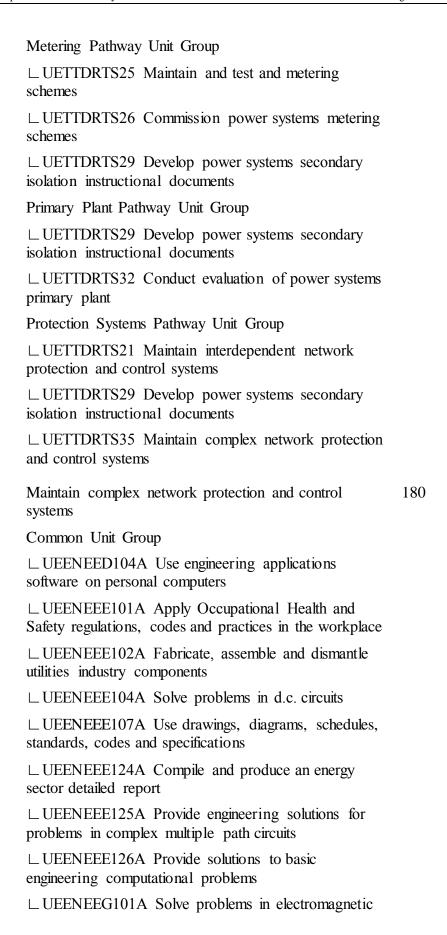∟ UETTDREL16 Working safely near live electrical apparatus

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UETTDRTS32	Conduct evaluation of power systems primary plant	160

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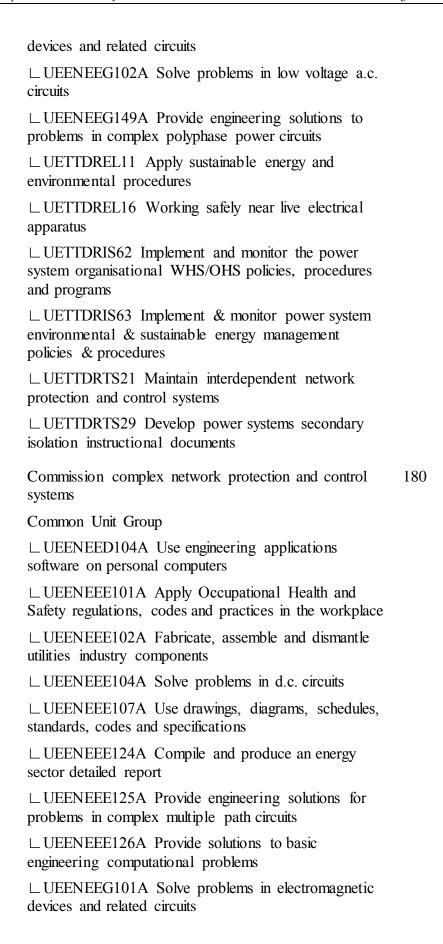
∟UETTDRTS29 Develop power systems secondary isolation instructional documents

| UETTDRTS33 | Undertake power systems project management of substation augmentation and maintenance | 180 |

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∟ UETTDRTS21 Maintain interdependent network protection and control systems

∟ UETTDRTS29 Develop power systems secondary isolation instructional documents

∟ UETTDRTS35 Maintain complex network protection and control systems

UETTDRTS35	Maintain complex network protection and control systems	180

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∟ UETTDRTS21 Maintain interdependent network protection and control systems

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UETTDRTS36	Commission complex network protection and control systems	180

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Qualification Mapping Information

This qualification replaces and is equivalent to UET60212 Advanced Diploma of ESI - Power Systems

Links

Companion Volume Implementation Guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=229bace1-b7bc-4653-9300-dffb13ecfad7