Australian Government

UET60212 Advanced Diploma of ESI - Power Systems

Release: 2

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

UET60212 Advanced Diploma of ESI — Power Systems

Modification History

Release	Action	Core/Elective	Details	Points
2	Update	Core	Update name of unit UEENEED104A Use engineering applications software on personal computers	40
2	Update	Group C	Update name of unit UEENEED117A Install and configure network systems for internetworking	120
2	Update	Core	Update name of unit UEENEEE102A Fabricate, assemble and dismantle utilities industry components	40
2	Add	Group E	UETTDRTS23A Conduct evaluation of power system substation faults	140
2	Add	Group E	UETTDRTS24A Design testing and commissioning procedures for field devices and substations	140
2	Add	Group E	UETTDRTS30A Design power systems secondary isolation instructional documents	160
2	Add	Group E	UETTDRTS32A Conduct evaluation of power systems primary plant	160
2	Add	Group E	UETTDRTS33A Undertake power systems project management of substation augmentation and maintenance	180
2	Add	Group E	UETTDRTS35A Maintain complex network protection and control systems	180
2	Add	Group E	UETTDRTS36A Commission complex network protection and control systems	180

Description

Scope:

Those gaining this qualification will be able to acquire additional skills and knowledge needed for a career in either, design, testing and or system operation.

Pathways Information

Not applicable.

Licensing/Regulatory Information

Not applicable.

Entry Requirements

Not applicable.

Employability Skills Summary

Not applicable.

Packaging Rules

Completion requirements:

The requirements for granting this qualification will be met when competency is demonstrated and achieved for:

- All the Core competency standard units, defined in the Core Competency Standard Units table below and
- A combination of Elective competency standard units to achieve a total weighting of 1340 points in accordance with the Elective Competency Standard Units table below.
- All the required prerequisite competency standard units have been met.

Core Units — All to be completed		**Weighting Points**
UEENEED104A	Use engineering applications software on personal computers	40
UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEE083A	Establish and follow a competency development plan in an electrotechnology engineering discipline	120
UEENEEE101A	Apply Occupational Health Safety regulations, codes and practices in the workplace	20
UEENEEE102A	Fabricate, assemble and dismantle utilities industry components	40
UEENEEE104A	Solve problems in d.c. circuits	80
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40
UEENEEE125A	Provide engineering solutions for problems in complex multiple path circuits problems	60
UEENEEE126A	Provide solutions to basic engineering computational problems	60
UEENEEG101A	Solve problems in electromagnetic devices and related circuits	60
UEENEEG102A	Solve problems in low voltage a.c. circuits	80
UEENEEG149A	Provide engineering solutions to problems in complex polyphase power circuits	60
UETTDREL11A	Apply sustainable energy and environmental procedures	20
UETTDREL16A	Working safely near live electrical apparatus	20
UETTDRIS62A	Implement and monitor the power systems	30

	organisational OHS policies, procedures and programs	
UETTDRIS63A	Implement and monitor power systems environmental and sustainable energy management policies and procedures	30
Total points in core		**820**

Elective Competency Standard Units At least a weighting of 1340 points to be achieved. Must achieve at least 140 points from Group D and 440 points from Group E.			
Group	**Rules**	**Minimum points**	**Maximum points**
A	**Imported and Common Elective Units** Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 6. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points.	**0**	**360**
B	**Qualification Electives** You may select units from this group to a maximum weighting of 400 points.	**0**	**400**
C	**Qualification Electives** You may select units from this group to a maximum weighting of 200 points.	**0**	**200**
D	**Qualification Electives** You must select units from this group with a minimum weighting of 140 points and a maximum weighting of 900 points.	**140**	**900**
E	**Qualification Electives** You must select units from this group with a minimum weighting of 440 points and a maximum weighting of 1200 points.	**440**	**1200**

Group A You may select units from this group to a maximum weighting of 360 points.		**Weighting Points**
BSBWOR501B	Manage personal work priorities and professional development	60
BSBMGT502B	Manage people performance	70
BSBMGT515A	Manage operational plan	60
BSBINM501A	Manage an information or knowledge management system	50
BSBCUS501C	Manage quality customer service	40
BSBMGT516C	Facilitate continuous improvement	60
BSBINN502A	Build and sustain an innovative work environment	50
BSBLED501A	Develop a workplace learning environment	60
BSBWOR502B	Ensure team effectiveness	60
BSBFIM501A	Manage budgets and financial plans	70
BSBSUS501A	Develop workplace policy and procedures for sustainability	50
	Imported units from other training packages and/or state accredited courses can be added to this group, but they must be selected from qualifications where the unit is first packaged at AQF level 6. If units have not being assigned a weighting by the relevant EE-Oz Industry Technical Advisory Committee, their weighting will be 10 points. Note: For further information see Application of the NQC Flexibility Formula, Page 10, UET12 Electricity Supply Industry – Transmission, Distribution and Rail Sector Training Package, Version 1, Volume 1 Qualification Framework.	Up to 360 Points

Group B You may select units from this group to a maximum weighting of 400 points.		**Weighting Points**
UEENEEG006A	Solve problems in single and three phase low voltage machines	80
UEENEEH102A	Repair basic electronic apparatus faults by replacement of components	40
UEENEEH112A	Troubleshoot digital sub-systems	80
UEENEEH139A	Troubleshoot basic amplifier circuits	40
UETTDREL15A	Respond to power systems technical enquiries and requests	40
UETTDRIS67A	Solve problems in energy supply network equipment	80
UETTDRIS68A	Solve problems in energy supply network protection equipment and systems	40

Group C You may select units from this group to a maximum weighting of 200 points.		**Weighting Points**
UEENEED117A	Install and configure network systems for internetworking	120
UEENEEI155A	Develop structured programs to control external devices	40
UETTDRDS31A	Draft and layout a power system overhead distribution extension	60
UETTDRDS32A	Draft and layout a power system underground distribution extension	60
UETTDRDS33A	Draft and layout a power system street lighting system	60
UETTDRDS34A	Draft and layout a power system distribution substation minor upgrade	60

Group D You must select units from this group with a minimum weighting of 140 points and a maximum weighting of 900 points.		**Weighting Points**
UEENEEI156A	Develop and test code for microcontroller devices	60
UETTDRDS35A	Design overhead distribution power systems	140
UETTDRDS36A	Design underground distribution power systems	140

UETTDRDS37A	Design power system distribution substations	140
UETTDRDS38A	Design power system public lighting systems	140
UETTDRDS39A	Prepare and manage detailed construction plans for electrical power system infrastructure	140
UETTDRDS42A	Investigate quality of power systems supply issues	140
UETTDRDS43A	Develop high voltage and low voltage distribution protection systems	150
UETTDRDS44A	Design power system zone substations modifications	150
UETTDRDS45A	Organise and implement ESI line and easement surveys	140
UETTDRDS46A	Develop planned power systems outage strategies	140
UETTDRDS49A	Establish and manage power system geographical information systems data	140
UETTDRIS66A	Manage an electricity power system OHS management system	140
UETTDRIS69A	Diagnose and rectify faults in energy supply apparatus	60
UETTDRIS70A	Diagnose and rectify faults in electrical energy distribution systems	60
UETTDRIS72A	Diagnose and rectify faults in distributed Generation systems	60
UETTDRSO36A	Develop low voltage distribution switching programs	150
UETTDRSO37A	Develop high voltage distribution and subtransmission switching programs	150
UETTDRSO38A	Develop and evaluate power systems transmission switching programs	150
UETTDRSO39A	Coordinate low voltage distribution networks	150
UETTDRSO40A	Coordinate high voltage distribution and subtransmission networks	150
UETTDRSO43A	Coordinate low voltage distribution network demand	150
UETTDRSO45A	Operate and monitor system SCADA equipment	150
UETTDRSO46A	Monitor and control the field staff activities	150
UETTDRSO47A	Coordinate high voltage transmission network	150
UETTDRSO48A	Respond to discrete and interdependent protection	150

	operations	
UETTDRSO49A	Coordinate power system operations in a regulated energy market	150
UETTDRTS21A	Maintain interdependent network protection and control systems	150
UETTDRTS22A	Commission interdependent network protection and control systems	150
UETTDRTS25A	Maintain and test and metering schemes	140
UETTDRTS26A	Commission power systems metering schemes	150
UETTDRTS27A	Perform accuracy checks on power systems instrument transformers	150
UETTDRTS28A	Repair, test and calibrate protection relays and meters	150
UETTDRTS29A	Develop power systems secondary isolation instructional documents	150
UETTDRTS31A	Maintain, test and commission power systems voltage regulating equipment	150
UETTDRTS34A	Install and maintain power system communication equipment	150

Group E You must select units from this group with a minimum weighting of 440 points and a maximum weighting of 1200 points.		**Weighting Points**
UETTDRDS40A	Prepare and appraise power systems financial impact statements	160
UETTDRDS41A	Manage electrical power systems infrastructure projects	160
UETTDRDS47A	Review power system asset management strategies	150
UETTDRDS48A	Analyse and appraise power system fault and outage data	150
UETTDRDS50A	Design customer power system substations	140
UETTDRDS51A	Manage power system transmission and sub-transmission design process	150
UETTDRDS52A	Design power system transmission, sub-transmission and zone substation buildings	160
UETTDRDS53A	Design power system transmission and sub-transmission substation primary plant	180
UETTDRDS54A	Design power system transmission and	180

	sub-transmission protection and control	
UETTDRDS55A	Design power system transmission and sub-transmission substation earthing	160
UETTDRDS56A	Design power system transmission, sub-transmission and zone substation – civil and structural components	160
UETTDRDS57A	Design power system overhead transmission systems	160
UETTDRDS58A	Design underground transmission systems	160
UETTDRIS71A	Develop engineering solutions for energy supply power transformer problems	60
UETTDRIS73A	Develop engineering solutions for energy supply power transformer problems	60
UETTDRSO32A	Manage power systems network faults	180
UETTDRSO33A	Manage power systems critical events	180
UETTDRSO34A	Control power systems generating plant	140
UETTDRSO35A	Manage high voltage distribution and subtransmission network demand	180
UETTDRSO41A	Manage power systems transmission networks	180
UETTDRSO42A	Manage power systems transmission network demand	180
UETTDRSO44A	Develop crisis power systems management plans	140
UETTDRSO50A	Respond to complex power system protection operations	180
UETTDRSO51A	Manage network systems power flows	180
UETTDRTS23A	Conduct evaluation of power system substation faults	140
UETTDRTS24A	Design testing and commissioning procedures for field devices and substations	140
UETTDRTS30A	Design power systems secondary isolation instructional documents	160
UETTDRTS32A	Conduct evaluation of power systems primary plant	160
UETTDRTS33A	Undertake power systems project management of	180

	substation augmentation and maintenance	
UETTDRTS35A	Maintain complex network protection and control systems	180
UETTDRTS36A	Commission complex network protection and control systems	180

END OF QUALIFICATION

Custom Content Section

Not applicable.