



Australian Government

UEE62011 Advanced Diploma of Engineering Technology - Renewable Energy

Release 4

UEE62011 Advanced Diploma of Engineering Technology - Renewable Energy

Modification History

Release	Action	Core/Elective	Details	Points
2	Edit		Edit Name to reflect correct Unit title UEENEE104A Use engineering applications software on personal computers	40

3	Edit	Group C	Edit Name to reflect correct Unit title UEENEE151A Develop, enter and verify word and analogue control programs for programmable logic controllers.	60
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4	Edit	Core	Correct title of UEENEE080A - Apply industry and community standards to engineering activities	20
4	Edit	Core	Correct title of UEENEE101A - Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
4	Edit	Core	Correct title of UEENEE102A - Fabricate, assemble and dismantle utilities industry components	40
4	Edit	Core	Correct title of UEENEE108A - Lay wiring/cabling and terminate accessories for extra-low voltage (ELV) circuits	40
4	Edit	Core	Correct title of UEENEE125A - Provide engineering solutions for problems in complex multiple path circuits	60
4	Edit	Core	Correct title of UEENEE128A - Solve problems in stand-alone renewable energy systems	60
4	Edit	Elective	Correct title of UEENEE004B - Prepare specifications for the supply of materials and equipment for electrotechnology projects	40
4	Edit	Elective	Correct title of UEENEE114A - Supervise and	40

			coordinate energy sector work activities	
4	Edit	Elective	Correct title of UEENEEE192A - Produce detailed electrotechnology /utilities drawings using computer aided design equipment and software	60
4	Edit	Elective	Correct title of UEENEEK110A - Co-ordinate maintenance of renewable energy (RE) apparatus and systems	20
4	Edit	Elective	Correct title of UEENEEK117A - Maintain and repair facilities associated with remote area essential service operations	120
4	Edit	Elective	Correct title of UEENEEK130A - Solve problems in wind energy conversion systems rated up to 10 kW	60
4	Edit	Elective	Correct title of UEENEEK131A - Design wind energy conversion systems (WECS) rated to 10 kW	60
4	Edit	Elective	Correct title of UEENEEK134A - Install ELV stand-alone photovoltaic power systems	60
4	Edit	Elective	Correct title of UEENEEK135A - Design grid connected photovoltaic power supply systems	60
4	Edit	Elective	Correct title of UEENEEK138A - Design micro-hydro systems rated to 6.4 kW	60
4	Edit	Elective	Correct title of UEENEEK139A - Design stand-alone renewable energy (RE) systems	40
4	Edit	Elective	Correct title of UEENEEK140A - Develop engineering solutions to renewable energy (RE) problems	60
4	Edit	Elective	Correct title of UEENEEK143A - Install small wind energy conversion systems rated up to 10 kW for ELV stand-alone applications	20
4	Edit	Elective	Correct title of UEENEEK146A - Design energy management controls for electrical installations in buildings	80
4	Edit	Elective	Correct title of UEENEEK149A - Verify compliance and functionality of a extra low voltage renewable energy installation	40
4	Edit	Elective	Correct title of UEENEEK151A - Develop effective	60

			engineering strategies for energy reduction in buildings	
4	Edit	Elective	Correct title of UEENEOP026A - Conduct in-service safety testing of electrical cord connected equipment and cord assemblies	60

Description

Scope

This qualification provides competencies in preparation to design and validate/evaluate renewable energy equipment and systems and provide technical advice/sales.

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 900 points in accordance with the Elective Competency Standard Units table below.

Core Competency Standard Units		Weighting Points
All Core competency standard units to be achieved		
UEENEED104A	Use engineering applications software on personal computers	40
UEENEEE015B	Develop design briefs for electrotechnology projects	40
UEENEEE074B	Write specifications for renewable energy engineering projects	40
UEENEEE080A	Apply industry and community standards to engineering activities	20
UEENEEE081A	Apply material science to solving electrotechnology engineering problems	60
UEENEEE082A	Apply physics to solving electrotechnology engineering problems	60
UEENEEE101A	Apply Occupational Health and 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
UEENEEE105A	Fix and secure electrotechnology equipment	20
UEENEEE107A	Use drawings, diagrams, schedules, standards, codes and specifications	40
UEENEEE108A	Lay wiring/cabling and terminate accessories for extra-low voltage (ELV) circuits	40
UEENEEE117A	Implement and monitor energy sector OHS policies and	20

	procedures	
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	60
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
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
UEENEEK121A	Manage renewable energy (RE) projects	40
UEENEEK122A	Plan renewable energy (RE) projects	60
UEENEEK123A	Carry out basic repairs to renewable energy apparatus	80
UEENEEK125A	Solve basic problems in photovoltaic energy apparatus and systems	20
UEENEEK127A	Diagnose and rectify faults in renewable energy control systems	60
UEENEEK128A	Solve problems in stand-alone renewable energy systems	60
UEENEEK132A	Develop strategies to address environmental and sustainability issues in the energy sector	20
Total points in core		1260

Elective Competency Standard Units

Complete Elective units to achieve a total of weighting of 900 points from the following groups:

Group	Minimum points	Maximum points
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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 Elective Units	0	240
C	Qualification Elective Units	0	220
D	Qualification Elective Units	0	220
E	Qualification Elective Units You may select all your elective units from this Group	280	320

Group A – Imported and Common Elective Units You may complete units to a maximum weighting of 360		Weighting Points
BSBINM501A	Manage an information or knowledge management system	50
BSBINN502A	Build and sustain an innovative work environment	50
BSBMGT502B	Manage people performance	70
BSBMGT516C	Facilitate continuous improvement	60
BSBWOR502B	Ensure team effectiveness	60
UEENEEC001B	Maintain documentation	20
UEENEEC002B	Source and purchase material/parts for installation or service jobs	20
UEENEEC003B	Provide quotations for installation or service jobs	20
UEENEEC010B	Deliver a service to customers	20
UEENEEC101A	Use computer applications relevant to a workplace	20
UEENEEE020B	Provide basic instruction in the use of electrotechnology apparatus	20

	<p>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.</p> <p>Note: For further information see Application of the NQC Flexibility Formula, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework</p>	Up to 360 points
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Group B – Qualification Elective Units You may complete units to a maximum weighting of 240		Weighting Points
UEENEEE190A	Prepare engineering drawings using manual drafting and CAD for electrotechnology/utilities applications	60
UEENEEE191A	Prepare electrotechnology/utilities drawings using manual drafting and CAD equipment and software	60
UEENEEI150A	Develop, enter and verify discrete control programs for programmable controllers	60
UEENEEK107A	Conduct checks in the demand side use of remote area power supplies (RAPS)	40
UEENEEK108A	Plan periodic maintenance schedules of remote area power supplies (RAPS)	40
UEENEEK109A	Attend to breakdowns in remote area power supplies (RAPS)	20
UEENEEK117A	Maintain and repair facilities associated with remote area essential service operations	120
UEENEEK120A	Maintain operation of remote area power generation plant	120
UEENEEK124A	Solve basic problems in micro hydro systems	20
UEENEEK130A	Solve problems in wind energy conversion systems rated up to 10 kW	60
UEENEEK134A	Install ELV stand-alone photovoltaic power systems	60
UEENEEK137A	Install, set up and maintain ELV micro-hydro systems rated up to 6.4 kW	20
UEENEEK143A	Install small wind energy conversion systems rated up to 10 kW for ELV stand-alone applications	20
UEENEEK149A	Verify compliance and functionality of a extra low voltage renewable energy installation	40
UEENEPP024A	Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply	20
UEENEPP025A	Attach cords, cables and plugs to electrical equipment	20

	for connection to 1000 Va.c. or 1500 Vd.c. supply	
UEENEEP026A	Conduct in-service safety testing of electrical cord connected equipment and cord assemblies	20

Group C – Qualification Elective Units You may complete units to a maximum weighting of 220		Weighting Points
UEENEEC004B	Prepare specifications for the supply of materials and equipment for electrotechnology projects	40
UEENEEC005B	Estimate electrotechnology projects	40
UEENEEE114A	Supervise and coordinate energy sector work activities	40
UEENEEE192A	Produce detailed electrotechnology /utilities drawings using computer aided design equipment and software	60
UEENEEI151A	Develop, enter and verify word and analogue control programs for programmable logic controllers.	60
UEENEEI152A	Develop, enter and verify programs in Supervisory Control and Data Acquisition systems	60
UEENEEK110A	Coordinate maintenance of renewable energy (RE) apparatus and systems	20
UEENEEK135A	Design grid connected photovoltaic power supply systems	60

Group D – Qualification Elective Units You may complete units to a maximum weighting of 220		Weighting Points
UEENEEG180A	Develop detailed and complex drawings for electrical systems using CAD systems	60
UEENEEK129A	Design renewable energy (RE) heating systems	120
UEENEEK131A	Design wind energy conversion systems (WECS) rated to 10 kW	60
UEENEEK138A	Design micro-hydro systems rated to 6.4 kW	60

Group E – Qualification Elective Units	Weighting
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You must complete units to a minimum weighting of 280 to a maximum of 320		Points
UEENEEK133A	Design hybrid renewable power systems	80
UEENEEK139A	Design stand-alone renewable energy (RE) systems	40
UEENEEK140A	Develop engineering solutions to renewable energy (RE) problems	60
UEENEEK146A	Design energy management controls for electrical installations in buildings	80
UEENEEK151A	Develop effective engineering strategies for energy reduction in buildings	60

Note:

1. Prerequisite pathways shall be identified and met for all elective units selected.
2. In selecting elective units considerations to career planning advice should be given to units that form part of a prerequisite pathway for the progression to achieve particular competencies or qualification at a higher level.
3. Registered training organisations shall also provide information related to the relevant pathway(s) that may be taken to achieve paraprofessional status ("associate membership") with a professional engineering membership organisation.

END OF QUALIFICATION**Custom Content Section**

Not applicable.