Australian Government

UEE60922 Advanced Diploma of Renewable Energy Engineering

Release 1

UEE60922 Advanced Diploma of Renewable Energy Engineering

Modification History

Release 1. This is the first release of this qualification in the UEE Electrotechnology Training Package

This qualification replaces and is not equivalent to UEE60920 Advanced Diploma of Renewable Energy Engineering. Modifications include:

* Qualification description updated
* Significant changes to core and elective unit structure and packaging rules

Qualification Description

This qualification provides competencies to design and validate/evaluate renewable energy (RE) equipment and systems, manage risk, estimate and manage projects and provide technical advice.

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

Entry Requirements

The entry requirement for this qualification is:

* UEE30820 Certificate III in Electrotechnology Electrician

or

* a current 'Unrestricted Electricians Licence' or its equivalent issued in an Australian state or territory.

Packaging Rules

A total of **1320 weighting points** comprising:

830 **core weighting point**s; **plus**

490 **elective weighting points**

Choose a minimum of 470 elective weighting points units from the list below, of which:

* 20 weighting points must be taken from Group A
* a minimum of 120 weighting points must be taken from Group B
* between 0 and 350 weighting points can be taken from Group C
* between 0 and 250 weighting points can be taken from Group D

Up to 150 weighting points of the general elective units Group C, may be selected, with appropriate contextualisation, from any relevant nationally endorsed Training Package or accredited course, provided that selected units contribute to the vocational outcome of the

qualification. Previously assigned weighting points are listed in the UEE Electrotechnology Training Package Companion Volume Implementation Guide (CVIG), if not listed weighting points will be 10 points, unless directed from the Electrotechnology Industry Reference Committee (IRC).

There are units of competency within this qualification that contain pre-requisites. Units of competency that have a pre-requisite requirement are identified by this symbol *. Refer directly to the units of competency to identify pre-requisite requirements to ensure all are complied with. A list of all pre-requisites is also provided in the UEE Pre-requisite Companion Volume.

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

Core units		Weighting Points
UEECD0003	Apply industry and community standards to engineering activities	20
UEECD0004	Apply material science to solving electrotechnology engineering problems	60
UEECD0005	Apply physics to solving electrotechnology engineering problems	60
UEECD0010	Compile and produce an energy sector detailed report	60
UEECD0014	Develop design briefs for electrotechnology projects	40
UEECD0024	Implement and monitor energy sector WHS policies and procedures	20
UEECD0026	Manage risk in electrotechnology activities	60
UEECD0036	Provide engineering solutions for problems in complex multiple path circuits	60
UEECD0039	Provide solutions to basic engineering computational problems*	60
UEECD0062	Write specifications for renewable energy engineering projects	40
UEEEL0062	Provide engineering solutions to problems in complex polyphase power circuits*	60
UEERE0049	Apply safe work practices in the rooftop solar industry	20
UEERE0054	Conduct site survey grid-connected photovoltaic and battery storage systems	30
UEERE0055	Conduct site survey for off-grid photovoltaic/generating	40

	set systems	
UEERE0056	Coordinate maintenance of renewable energy (RE) apparatus and systems*	20
UEERE0078	Install battery storage to power conversion equipment *	30
UEERE0081	Install photovoltaic systems to power conversion equipment *	30
UEERE0082	Maintain renewable energy (RE) apparatus *	20
UEERE0084	Manage renewable energy (RE) projects	40
UEERE0085	Plan renewable energy (RE) projects	60
Group A Elective units		**Weighting Points**
UEEEL0047	Identify, shut down and restart systems with alternate supplies*	20
UEERE0050	Identify and isolate multiple supply systems *	20
Group B elective units		**Weighting Points**
CPPHES4005	Assess household energy use and efficiency improvements	40
UEERE0052	Assess energy loads and uses for energy efficiency in commercial facilities*	40
UEERE0053	Assess energy loads and uses for energy efficiency in industrial properties and enterprises*	40
UEERE0057	Coordinate the design of micro-grid renewable energy systems	50
UEERE0058	Coordinate the installation, fault finding and repair of micro grid systems	40
UEERE0059	Design energy management controls for electrical installations in buildings*	80
UEERE0061	Design grid-connected photovoltaic power supply systems *	40
UEERE0062	Design micro-hydro systems *	40
UEERE0063	Design off-grid photovoltaic/generating Systems *	40

UEERE0064	Design renewable energy heating systems *	40
UEERE0065	Design wind energy systems *	40
UEERE0066	Develop effective engineering strategies for energy reduction in buildings*	60
UEERE0067	Develop engineering solutions to renewable energy (RE) problems*	60
UEERE0068	Develop strategies to address sustainability issues for electrical installations	20
UEERE0069	Diagnose and rectify faults in renewable energy (RE) control systems*	60

Group C elective units		Weighting Points
UEECD0001	Analyse materials for suitability in electrical equipment*	80
UEECD0002	Analyse static and dynamic parameters of electrical equipment	80
UEECD0037	Provide engineering solutions for uses of materials and thermodynamic effects	80
UEECD0049	Use advanced computational processes to provide solutions to energy sector engineering problems*	80
UEEEC0060	Repairs basic electronic apparatus faults by replacement of components*	40
UEEEC0075	Troubleshoot single phase input d.c power supplies*	40
UEEEL0013	Install, set up and commission interval metering*	20
UEEEL0027	Carry out low voltage electrical field testing and report findings*	60
UEEEL0035	Design effective and efficient lighting for public, open and sports areas*	20
UEEEL0037	Design electrical installations with a low voltage demand greater than 400 A per phase*	40
UEEEL0038	Design switchboards rated for high fault levels (greater than 400 A)*	60
UEEEL0040	Develop compliance policies and plans to conduct an electrical contracting business*	80

UEEEL0050	Install and replace low voltage current transformer metering*	20
UEEEL0057	Plan electrical installations with a low voltage demand up to 400 A per phase*	40
UEEEL0059	Plan low voltage switchboard and control panel layouts*	40
UEEEL0071	Select low voltage power factor correction equipment*	40
UEEEL0072	Set up and place LV electrical apparatus and associated circuits into service*	40
UEEIC0002	Assemble, enter and verify operating instructions in microprocessor equipped devices*	20
UEEIC0010	Develop and test code for microcontroller devices	60
UEEIC0013	Develop, enter and verify discrete control programs for programmable controllers*	60
UEEIC0014	Develop, enter and verify programs in supervisory control and data acquisition systems*	60
UEEIC0015	Develop, enter and verify word and analogue control programs for programmable logic controllers*	60

Group D Elective units		Weighting Points
BSBINS501	Implement information and knowledge management systems	50
BSBLDR522	Manage people performance	70
BSBSTR501	Establish innovative work environments	50
BSBSTR502	Facilitate continuous improvement	60
BSBTWK502	Manage team effectiveness	60
ICTICT214	Operate application software packages	20
UEECD0012	Contribute to risk management in electrotechnology systems	20
UEECD0029	Plan electrotechnology projects	60
UEECD0030	Prepare electrotechnology/utilities drawings using manual drafting and CAD equipment and software*	60

UEECD0031	Prepare engineering drawings using manual drafting and CAD for electrotechnology applications*	60
UEECD0032	Produce detailed electrotechnology/utilities drawings using CAD equipment and software*	60
UEECD0056	Apply methods to maintain currency of industry developments	20
UEECO0001	Estimate electrotechnology projects	40
UEECO0003	Manage contract variations	40
UEECO0014	Prepare tender submissions for electrotechnology projects*	60
UEECS0033	Use engineering applications software on personal computers	40
UEEEL0006	Develop detailed and complex drawings for electrical systems using CAD systems*	60
UEEEL0007	Develop detailed electrical drawings*	60

Qualification Mapping Information

This qualification replaces and is not equivalent to UEE60920 Advanced Diploma of Renewable Energy Engineering

Links

Companion Volume Implementation Guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b8a8f136-5421-4ce1-92e0-2b50341431b6