Australian Government

UEE60211 Advanced Diploma of Electronics and Communications Engineering

Release: 2

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

UEE60211 Advanced Diploma of Electronics and Communications Engineering

Modification History

Release	Action	Core/Elective	Details	Points
2	Add	Group B	UEENEEP024A Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply	20
2	Add	Group E	UEENEEE081A Apply material science to solving electrotechnology engineering problems	60
2	Add	Group E	UEENEEE082A Apply physics to solving electrotechnology engineering problems	60
2	Add	Group B	UEENEEF106A Solve problems in voice and data communications circuits	40
2	Add	Group D	UEENEED147A Develop energy sector directory services	80
2	Add	Group D	UEENEEH188A Design and develop electronics/ computer systems projects	40
2	Add	Group D	UEENEEE161A Analyse static and dynamic parameters of electrical equipment	80
2	Edit		Edit Name to reflect correct Unit title UEENEED104A Use engineering applications software on personal computers	40
2	Edit		Edit Name to Reflect correct Unit Title UEENEEI124A Fault find and repair analogue circuits and components in electronic control systems	
2	Edit		Edit Name to reflect correct Unit title UEENEEE117A Implement and monitor energy sector OHS policies and procedures	
2	Edit		Edit Name to reflect correct Unit title UEENEEE124A Compile and produce an energy sector detailed report	

2	Edit		Edit Name to reflect correct Unit title UEENEEK132A Develop strategies to address environmental and sustainability issues in the energy sector	
2	Update	Group A	MSS402001A Apply competitive systems and practices	20
2	Update	Group A	MSS402021A Apply Just in Time procedures	20
2	Update	Group A	MSS402080A Undertake root cause analysis	20
2	Update	Group A	MSS402081A Contribute to the application of a proactive maintenance strategy	20
2	Update	Group A	MSS402040A Apply 5S procedures	20
2	Update	Group A	MSS402020A Apply quick changeover procedures	20

Description

Scope
This qualification provides competencies to design and validate/evaluate electronics and communication equipment and systems, manage risk, estimate and manage projects 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 1880 points in accordance with the Elective Competency Standard Units table below.

Core Competency Standard Units All Core competency standard units to be achieved		**Weighting Points**
UEENEEE015B	Develop design brief for electrotechnology projects	40
UEENEEE038B	Participate in development and follow a personal competency development plan	20
UEENEEE078B	Contribute to risk management in electrotechnology systems	20
UEENEEE101A	Apply Occupational Health and Safety regulations, codes and practices in the workplace	20
UEENEEE117A	Implement and monitor energy sector OHS policies and procedures	20
UEENEEE137A	Document and apply measures to control OHS risks associated with electrotechnology work	20
UEENEEH141A	Manage computer systems/electronics projects	40
UEENEEH167A	Commission electronics and communications systems	20
UEENEEH168A	Modify/redesign of electronics and communications systems	20
UEENEEH188A	Design and develop electronics/ computer systems projects	40
UEENEEK132A	Develop strategies to address environmental and sustainability issues in the energy sector	20
Total points in core		**280**

Elective Competency Standard Units

Complete Elective units to achieve a total of weighting of 1880 points from the following groups:			
Group		**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 Elective Units**	0	900
C	**Qualification Elective Units**	0	280
D	**Qualification Elective Units**	0	260
E	**Qualification Elective Units**	520	1320

Group A – Imported and Common Elective Units You may complete units to a maximum weighting of 360		**Weighting Points**
BSBMGT502B	Manage people performance	70
BSBINM501A	Manage an information or knowledge management system	50
BSBMGT516C	Facilitate continuous improvement	60
BSBINN502A	Build and sustain an innovative work environment	50
BSBWOR502B	Ensure team effectiveness	60
ICTTEN3056A	Install telecommunications network equipment	40
MSS402001A	Apply competitive systems and practices	20
MSS402020A	Apply quick changeover procedures	20
MSS402021A	Apply Just in Time procedures	20
MSS402040A	Apply 5S procedures	20

MSS402080A	Undertake root cause analysis	20
MSS402081A	Contribute to the application of a proactive maintenance strategy	20
	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, UEE11 Electrotechnology Training Package, Version 1, Volume 1 Qualification Framework	Up to 360 points

Group B – Qualification Elective Units You may complete units to a maximum weighting of 900		**Weighting Points**
UEENEEA101A	Assemble electronic components	40
UEENEEA102A	Select electronic components for assembly	20
UEENEEA103A	Set up and check electronic component assembly machines	40
UEENEEA104A	Modify electronic sub assemblies	40
UEENEEA105A	Conduct quality and functional tests on assembled electronic apparatus	20
UEENEEA106A	Use lead-free soldering techniques	40
UEENEEB101A	Operate and maintain amateur radio communication stations	40
UEENEED102A	Assemble, set-up and test computing devices	80
UEENEED104A	Use engineering applications software on personal computers	40
UEENEED112A	Support computer hardware and software for engineering applications	120
UEENEED129A	Develop web pages for engineering applications	40
UEENEED130A	Select, install, configure and test multimedia components	40
UEENEED143A	Install and configure a client computer operating system and software	40
UEENEED146A	Set up and configure basic local area network (LAN)	40
UEENEED153A	Set up, configure and test biometric devices	40
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	40

	and specifications	
UEENEEE108A	Lay wiring/cabling and terminate accessories for extra-low voltage (ELV) circuits	40
UEENEEE121A	Plan an integrated cabling installation system	40
UEENEEE122A	Carry out preparatory energy sector work activities	60
UEENEEE123A	Solve basic problems electronic and digital equipment and circuits	80
UEENEEE179A	Identify and select components, accessories and materials for energy sector work activities	20
UEENEEF102A	Install and maintain cabling for multiple access to telecommunication services	120
UEENEEF104A	Install and modify performance data communication copper cabling	40
UEENEEF105A	Install and modify optical fibre performance data communication cabling	40
UEENEEF106A	Solve problems in voice and data communications circuits	40
UEENEEF107A	Set up and configure the wireless capabilities of communications and data storage devices	40
UEENEEF108A	Select and arrange equipment for wireless communication networks	40
UEENEEF109A	Install and connect data and voice communication equipment	40
UEENEEF110A	Select and arrange data and voice equipment for local area networks	40
UEENEEF111A	Test, report and rectify faults in data and voice installations	40
UEENEEF114A	Set up and configure basic data communication systems	40
UEENEEH101A	Repair basic computer equipment faults by replacement of modules/sub-assemblies	40
UEENEEH102A	Repairs basic electronic apparatus faults by	40

	replacement of components	
UEENEEH103A	Repair routine business equipment faults	120
UEENEEH104A	Set up and test residential video/audio equipment	40
UEENEEH105A	Verify functionality and compliance of custom electronic installations	40
UEENEEH106A	Assemble and set up fixed video/audio components and systems in buildings and premises	120
UEENEEH107A	Repair predictable faults in general electronic apparatus	40
UEENEEH108A	Assemble and install reception antennae and signal distribution equipment	60
UEENEEH109A	Set up and test gaming and game equipment	60
UEENEEH110A	Install commercial video/audio system components	120
UEENEEH111A	Troubleshoot single phase input d.c. power supplies	40
UEENEEH112A	Troubleshoot digital sub-systems	80
UEENEEH113A	Troubleshoot amplifiers in an electronic apparatus	80
UEENEEH114A	Troubleshoot resonance circuits in an electronic apparatus	80
UEENEEH115A	Develop software solutions for microcontroller based systems	60
UEENEEH116A	Find and repair microwave amplifier section faults in electronic apparatus	40
UEENEEH117A	Carry out repairs of predictable faults in video and audio replay/recording apparatus	120
UEENEEH118A	Fault find and repair electronic apparatus	40
UEENEEH119A	Repair predictable faults in television receivers	120
UEENEEH120A	Fault find and repair gaming and games equipment	80
UEENEEH121A	Fault find and repair high volume office equipment	120
UEENEEH122A	Fault find and repair remote control apparatus	60

UEENEEH123A	Fault find and repair microwave heating apparatus	40
UEENEEH124A	Repair predictable faults in audio components	40
UEENEEH127A	Set up and adjust commercial radio frequency (RF) transmission and reception systems	60
UEENEEH128A	Install and test microwave antennae and waveguides	60
UEENEEH138A	Fault find and repair complex power supplies	40
UEENEEH139A	Troubleshoot basic amplifier circuits	40
UEENEEH142A	Solve oscillator problems	40
UEENEEH146A	Solve fundamental electronic communications system problems	40
UEENEEH150A	Assemble and set up basic security systems	80
UEENEEH151A	Install large security systems	100
UEENEEH152A	Enter instructions and test wired and wireless security systems	40
UEENEEH154A	Program and commission commercial security systems	60
UEENEEH155A	Program and commission commercial access control security systems	60
UEENEEH156A	Program and commission commercial security closed circuit television systems	60
UEENEEH161A	Install fire detection and warning system apparatus	40
UEENEEH162A	Verify compliance and functionality of fire protection system installations	60
UEENEEH163A	Enter and verify programs for fire protection systems	40
UEENEEH164A	Commission large fire protection systems	40
UEENEEH165A	Troubleshoot fire protection systems	40
UEENEEH166A	Troubleshoot microcontroller based hardware systems	40
UEENEEH169A	Solve problems in basic electronic circuits	100

UEENEEH171A	Troubleshoot faults in television receivers	120
UEENEEH172A	Troubleshoot communication systems	80
UEENEEH173A	Troubleshoot professional audio reproduction components	120
UEENEEH174A	Troubleshoot audio/video recording equipment	120
UEENEEH187A	Solve problems in electronic musical equipment circuits	40
UEENEEI101A	Use instrumentation drawings, specification, standards and equipment manuals	40
UEENEEI116A	Assemble, enter and verify operating instructions in microprocessor equipped devices	20
UEENEEI117A	Calibrate, adjust and test measuring instruments	40
UEENEEP024A	Attach cords and plugs to electrical equipment for connection to a single phase 230 Volt supply	20

Group C – Qualification Elective Units You may complete units to a maximum weighting of 280		**Weighting Points**
UEENEEC004B	Prepare specifications for the supply of materials and equipment for electrotechnology projects	40
UEENEEC005B	Estimate electrotechnology projects	40
UEENEED103A	Evaluate and modify object oriented code programs	40
UEENEED110A	Set up, create and implement content for a web server	120
UEENEED154A	Analyse and implement biometric measuring techniques and applications	120
UEENEEE110A	Develop and implement energy sector maintenance programs	60
UEENEEE114A	Supervise and coordinate energy sector work activities	40
UEENEEE118A	Establish, maintain and evaluate energy sector OHS systems	60

UEENEEE124A	Compile and produce an energy sector detailed report	60
UEENEEH129A	Fault find and repair navigation systems	60
UEENEEH130A	Fault find and repair satellite-based surveillance and observation systems	60
UEENEEH131A	Fault find and repair radar apparatus and systems	120
UEENEEH132A	Fault find and repair global positioning systems	60
UEENEEH133A	Fault find and repair telecommunication apparatus and systems	60
UEENEEH134A	Fault find and repair electronic medical equipment	120
UEENEEH135A	Design custom electronic equipment installations	120
UEENEEH136A	Design commercial video/audio installations	120
UEENEEH137A	Program and commission commercial video/audio systems	40
UEENEEH140A	Fault find and repair sonar apparatus and systems	120
UEENEEH153A	Program and test large security systems	120
UEENEEH175A	Troubleshooting in security system installations	60
UEENEEH176A	Diagnose and rectify faults in electronic display circuits	60
UEENEEH177A	Diagnose and rectify faults in recording and replay equipment	60
UEENEEH178A	Diagnose and rectify faults in camera circuits and equipment	60
UEENEEH179A	Diagnose and rectify faults in digital television circuits and apparatus	80
UEENEEH180A	Diagnose and rectify faults in digital transmission circuits and systems	80
UEENEEH186A	Commission satellite and microwave communication systems	40
UEENEEI148A	Solve problems in single phase electronic power control circuits	60

UEENEEI155A	Develop structured programs to control external devices	40
UEENEEI157A	Configure and maintain industrial control system networks	60

Group D – Qualification Elective Units You may complete units to a maximum weighting of 260		**Weighting Points**
UEENEEC006B	Prepare tender submissions for electrotechnology projects	60
UEENEED147A	Develop energy sector directory services	80
UEENEED150A	Develop industrial control programs for microcomputer equipped devices	60
UEENEED151A	Provide programming solution for computer systems engineering problems	60
UEENEEE072B	Write specifications for electronics and communications engineering projects	40
UEENEEE125A	Provide engineering solutions for problems in complex multiple path circuit	60
UEENEEE126A	Provide solutions to basic engineering computational problems	60
UEENEED147A	Develop energy sector directory services	80
UEENEEE160A	Provide engineering solutions for uses of materials and thermodynamic effects	80
UEENEEH145A	Develop engineering solutions to analogue electronic problems	80
UEENEEH148A	Design and develop advanced digital systems	40
UEENEEH149A	Develop engineering solutions to audio electronic problems	60
UEENEEH157A	Develop basic plans for integrating security systems	40
UEENEEH181A	Design electronic printed circuit boards	40
UEENEEH182A	Develop engineering solutions to RF amplifiers	40

Group D – Qualification Elective Units You may complete units to a maximum weighting of 260		**Weighting Points**
	problems	
UEENEEH183A	Analyse the performance of wireless-based electronic/communication systems	40
UEENEEH188A	Design and develop electronics/ computer systems projects	40
UEENEEI153A	Design and configure Human-Machine Interface (HMI) networks	60
UEENEEI156A	Develop and test code for microcontroller devices	60

Group E – Qualification Elective Units You must complete units to a minimum weighting of 520 to a maximum of 1320		**Weighting Points**
UEENEEC007B	Manage contract variations	40
UEENEED152A	Design embedded controller control systems	80
UEENEED155A	Develop and validate biometric equipment/systems installation	120
UEENEEE011C	Manage risk in electrotechnology activities	100
UEENEEE081A	Apply material science to solving electrotechnology engineering problems	60
UEENEEE082A	Apply physics to solving electrotechnology engineering problems	60
UEENEEE127A	Use advanced computational processes to provide solutions to energy sector engineering problems	80
UEENEEE128A	Develop engineering solutions to photonic system problems	80
UEENEEE129A	Solve electrotechnical engineering problems	60
UEENEED149A	Develop energy sector computer network applications infrastructure	80

Group E – Qualification Elective Units You must complete units to a minimum weighting of 520 to a maximum of 1320		**Weighting Points**
UEENEEE163A	Analyse materials for suitability in electrical equipment	80
UEENEEH147A	Assess electronic apparatus compliance	60
UEENEEH158A	Design integrated security systems	40
UEENEEH159A	Design integrated complex security systems for multiple sites	60
UEENEEH160A	Plan large electronic projects	60
UEENEEH184A	Modify digital signal processing (DSP) based sub-systems	80
UEENEEH185A	Design signal-conditioning subsystems	80
UEENEEH189A	Provide Gate Array solutions for complex electronics systems	60
UEENEEI123A	Design electronic control systems	60
UEENEEI130A	Set up electronically controlled robotically operated complex systems	80
UEENEEI154A	Design and use advanced programming tools PC networks and HMI I interfacing	120
UEENEEE161A	Analyse static and dynamic parameters of electrical equipment	80

Note:
1. Pre-requisite 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 pre-requisite 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.